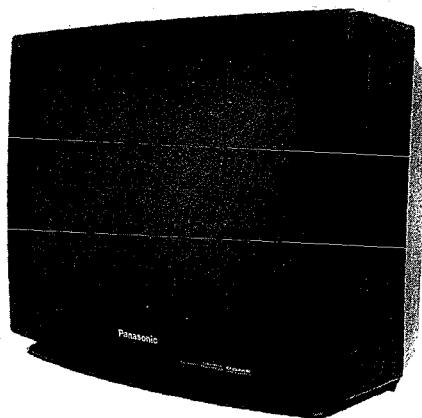


Service Manual



Specifications

Power Source: (AC) Auto 110-240V 50/60Hz

Power Consumption: 121 W
5 W (Stand-by condition)

Aerial Impedance : 75 Ω unbalanced,
Coaxial type.

Receiving System : 12 Systems

Receiving Channels :

- | | |
|------|--|
| VHF | 2 - 12 PAL B,G
0 - 11 PAL B (Australia)
1 - 11 PAL B (New Zealand)
1 - 12 NTSC M (Japan)
2 - 13 NTSC M (Japan) |
| UHF | 21 - 69 PAL B, G, I/SECAM B, G, I
28 - 69 PAL G (Australia)
13 - 57 PAL D |
| CATV | 13 - 62 NTSC M (Japan)
14 - 69 NTSC M (U.S.A.)
S1 - S20 |

Intermediate Frequency:

- | | |
|--------|---------------------|
| Video | 38.0 MHz |
| Sound | 31.5 MHz (D, K, K1) |
| | 32.0 MHz (I) |
| | 32.5 MHz (B, G) |
| Colour | 33.5 MHz (M) |
| | 33.57 MHz (PAL) |
| | 33.6 MHz (SECAM) |
| | 33.75 MHz (SECAM) |
| | 34.42 MHz (NTSC) |

Video / Audio Terminals

- AV 1, 2 : Video (PHONO) 1 Vp-p 75Ω
 S-Video Y : 1.0Vp-p 75Ω
 C : 0.3Vp-p 75Ω
 Audio(PHONO) Approx:400mV

Monitor Out: Video (PHONO) 1 Vp-p (75 Ω)
Audio (PHONO) Approx : 400mV

High Voltage : 28.5 kV (+0.7, -1.5)
at zero beam current

Picture Tube : A51KES165X (Singapore)
54 cm (21")
A51KES167X (N.Zealand)
51 cm(21")
Measured diagonally,
110° deflection

Audio Output : 5.0 W x 2
2 Speaker system L / R

Speaker : 128 x 7mm, 8Ω, ovaltype x 2
2 Speaker system L/R

Dimensions : Height : 441 mm
Width : 532 mm
Depth : 394 mm

Mass : 22.5 kg (Net)

Remote Controller : 37 Functions infrared controller

Specifications are subject to change without notice.
Mass and dimensions shown are approximate

Panasonic

Contents

• Safety Precautions	2
• Location of Controls	3
• MX-1A chassis Block Diagram	4
• Disassembly & Set-up Mode	6
• Adjustments	8
• Conductor Views	15
• Block Diagrams For Integrated Circuits	16
• Test Point Waveforms	17
• Schematic Diagrams	18
• Parts Location	22
• Replacement Parts List	23

Safety Precautions

General Guide Lines

1. It is advisable to insert an isolation transformer in the AC supply before servicing this hot chassis.
2. When servicing, observe the original lead dress, especially the lead dress in the high voltage circuits.
If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shields, and isolation R-C combinations, are properly installed.
4. When the receiver is not to be used for a long period of time, unplug the power cord from the AC outlet.
5. Potential, as high as 29.2 kV, is present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture tube to the receiver chassis before handling the tube.
6. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shafts, etc. When the exposed

metallic part has a return path to the chassis, the reading should be between $4\text{ M}\Omega$ and $20\text{ M}\Omega$.

When the exposed metal does not have a return path to the chassis, the reading must be infinite.

Leakage Current Hot Check (See NO TAG)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a $2\text{ k}\Omega$, non-inductive resistor and an AC/DC current meter, in series with each exposed metallic part on the receiver in turn and an earth such as a water pipe.
3. The current from any point should not exceed 0.7 mA peak AC or 2mA DC. In the case of a measurement being outside of these limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

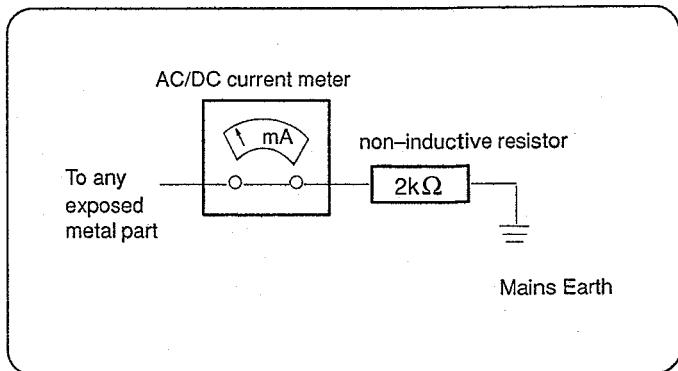


Fig. 1 Hot - Check Circuit

X-Radiation

Warning :

The potential sources of X-Radiation in TV sets are the EHT section and the picture tube.

When using a picture tube test jig for service, ensure that jig is capable of handling 29.2 kV without causing X-Radiation.

Note : It is important to use an accurate periodically calibrated high voltage meter.

1. Set the brightness to minimum.
2. Set the service switch to the SERVICE position.
3. Measure the EHT. The meter reading should indicate 28.5 (+0.7, -1.5) kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
4. To prevent the possibility X-Radiation, it is essential to use the specified picture tube, if service replacement becomes necessary.

Shut Down Circuit Test

This test must be made as a final check before the set is returned to the customer.

1. Operates the TV set.
2. Set Controls :
Screen (on FBT) minimum
Contrast minimum
Colour minimum
3. Connect a DC voltmeter to cathode of D523, and confirm that the voltage reading is 26.3 V, or less.
4. Supply 26.3 V DC to cathode of D523 and confirm that the shut down circuit does not operate.
5. Supply 28.5 V DC to cathode of D523, and confirm that the shut down circuit operates.
6. Switch the set off and disconnect the DC supply. Switch the set on and Normalize the contrast and colour.

Location of Controls

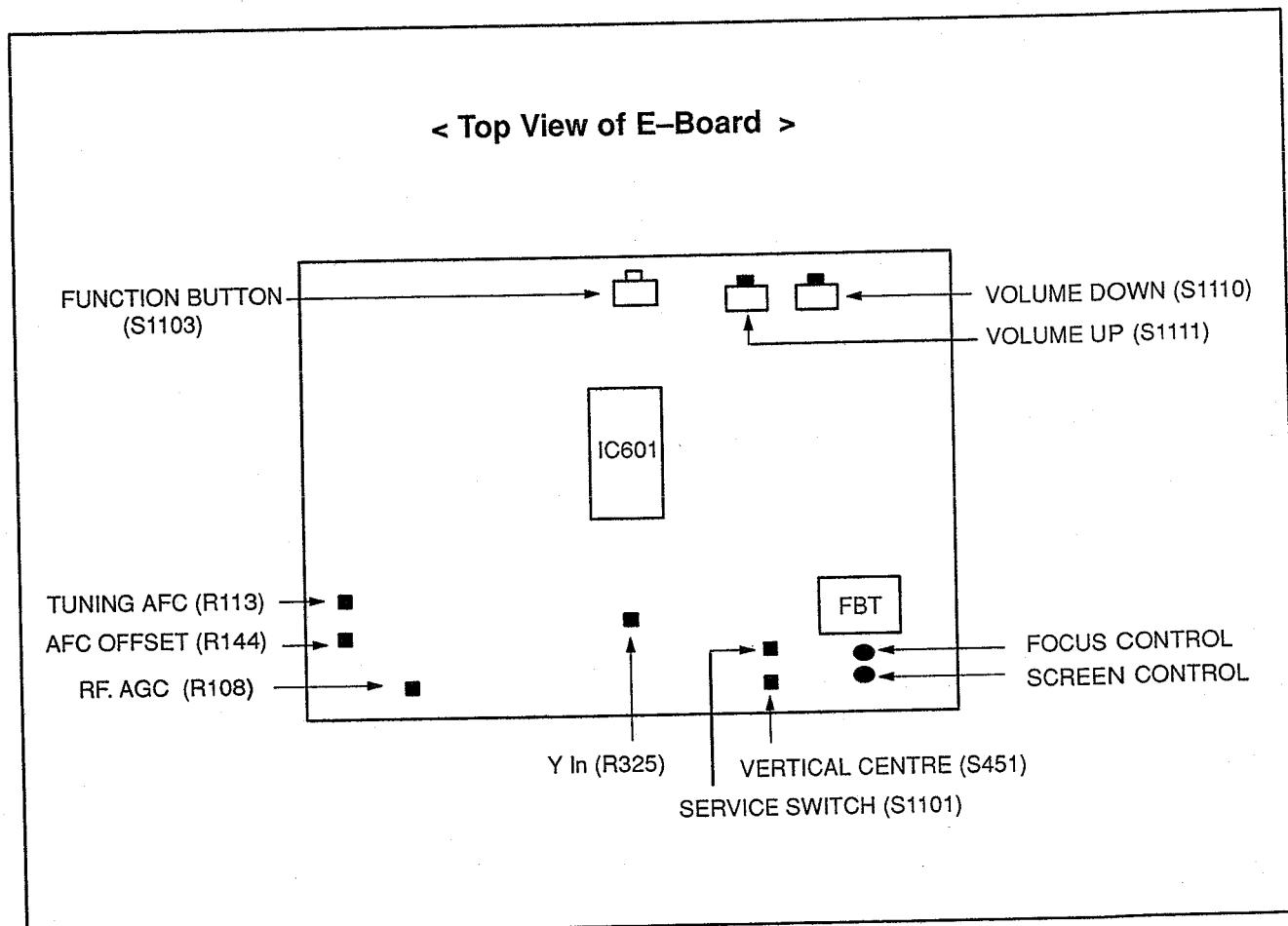
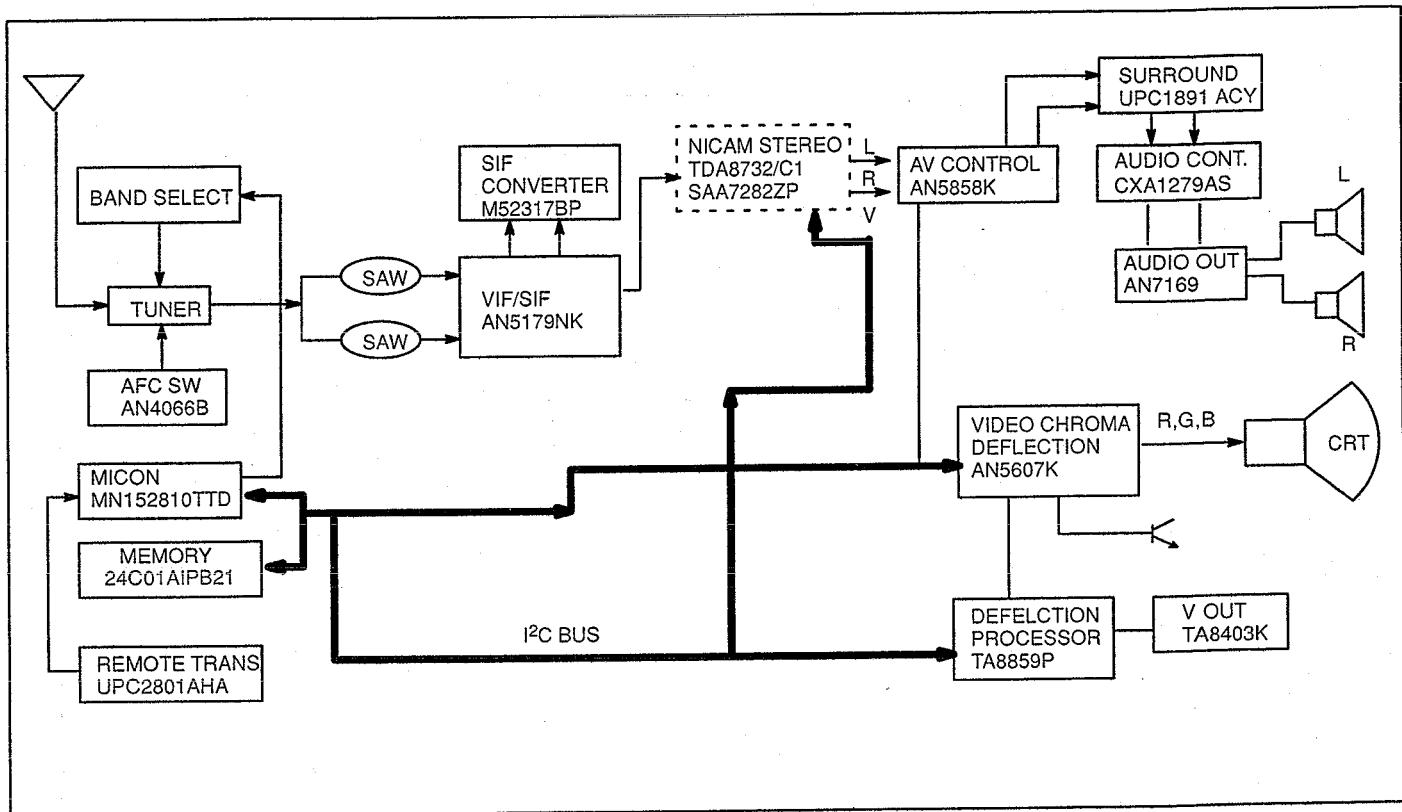


Fig. 2

MX-2 Chassis Block Diagram



The I²C Bus Concept :

A. Features

1. The I²C bus is a 2 – wire serial bus consisting of a clock line (SCL) and a data line (SDA).
2. It allows bi – directional data transfer, between IC's.
3. It consists of a master and one or more slave IC's.
 - The master initiates transfer and generates clock signals.
 - The slave is the IC addressed by a master.

B. Basic Format of the I²C Data transmission from the microcomputer (IC1102) to the IC601.**1. Transfer Timing**

During transmission from the microcomputer to IC601, 12 bytes of each of the following types of information is transferred one at a time:

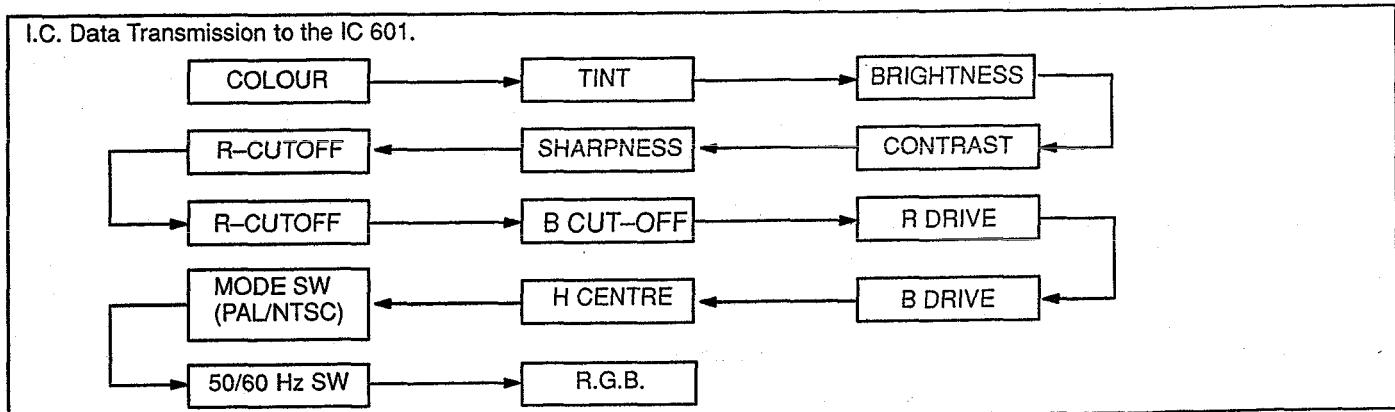


Fig. 4

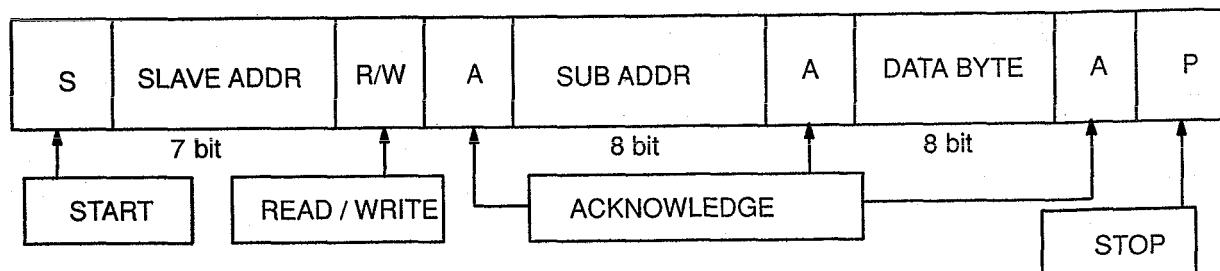
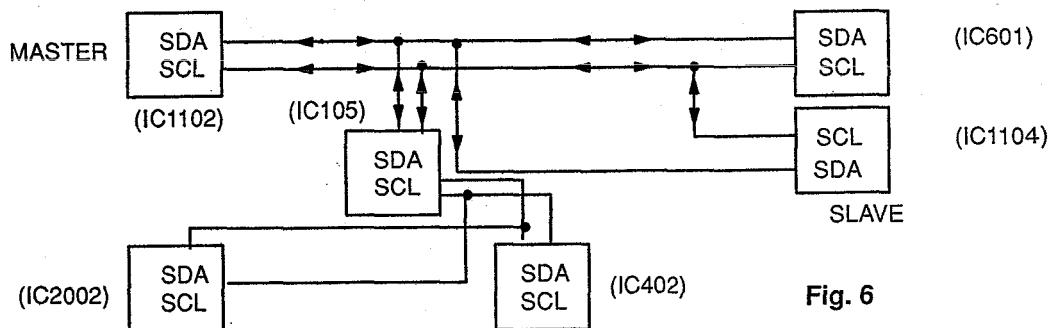
2. Format

Fig. 5

C. I²C Application in the MX-2 Chassis.

During transfer the microcomputer IC1102 in the TV set is always the master device. IC601 and IC1104 are slave addressed by IC1102.

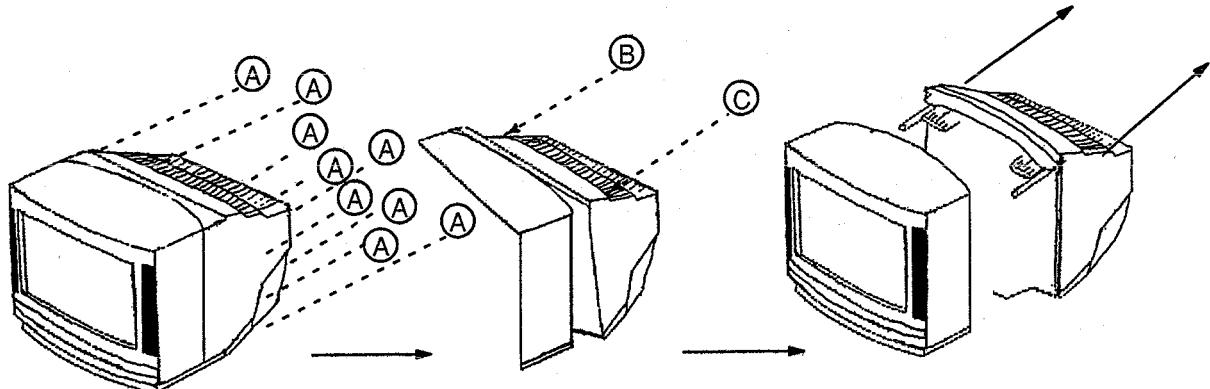
1. Various control functions are possible via the I²C bus from the microcomputer IC1102 to VCJ IC601, as shown in Fig. 4.
2. Data like position, BT voltage, band, AFC, skip, volume, recall, power and off timer setting, service mode setting, colour setting, function etc, are stored and read out from the EEPROM IC1104 via the I²C bus.

Disassembly and Set -up Mode

1. Service Position for E-Board.

1. Remove the back cover as shown in fig. 7.

1. Unscrew the back cover as shown at **(A)** (9 pcs)



2. Pull both edges at the bottom of the back cover as shown in diagram above till the edge comes out slightly as shown in the next diagram.

3. Pull slightly on **(B)** and **(C)** till it opens.

4. Hold the cabinet and pull the back cover from the cabinet.

Fig.7

2. Stand the TV set as shown in fig. 8.

3. Remove the E-Board from the TV set by pressing the chassis guide and pulling the main board out as shown in figure 8.

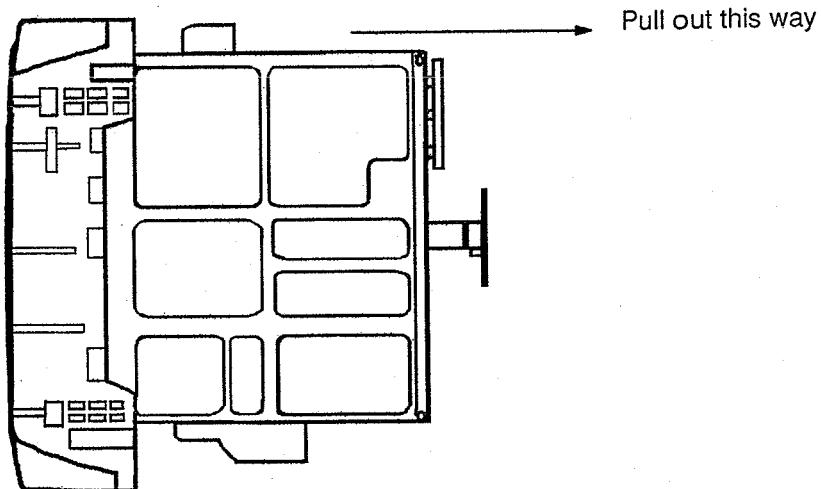


Fig.8

2. How to set the Factory Mode for adjustment.

Follow the Steps shown in the block diagram below to set the Factory Mode for sub-colour; sub-bright; sub-contrast; RGB low-light and RGB high-light adjustments and return to Normal mode after adjustment.
When the IC601(VCJ) or IC1104 are replaced, these adjustment must be done as below.

The Sub Adjustment mode.

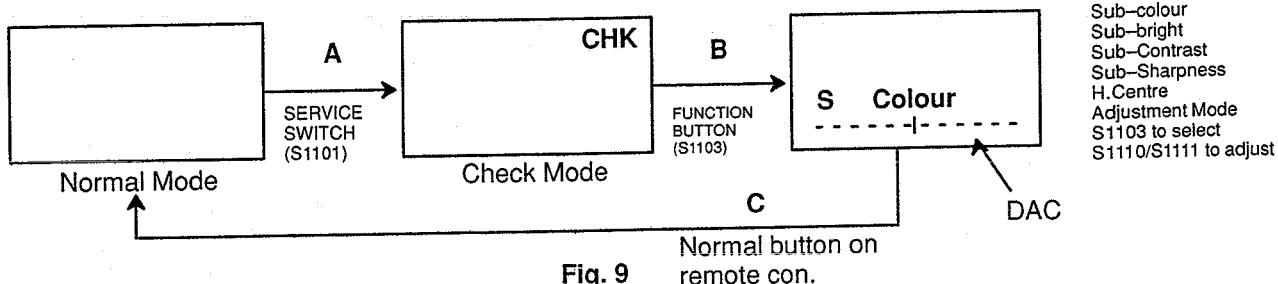


Fig. 9

A: Press the Service Switch (S1101).

The TV in the Normal mode changes to check mode. "CHK" will appear on the screen as shown in Fig. 9.

B: Press the Function button (S1103) to select the required adjustment to be adjusted as shown in Fig. 9.
Press the Volume "up" or "down" button (S1110 & S1111) to change the DAC level.

C: Press the Normal button on the remote control transmitter twice to return to Normal mode.

The CRT Adjustment mode.

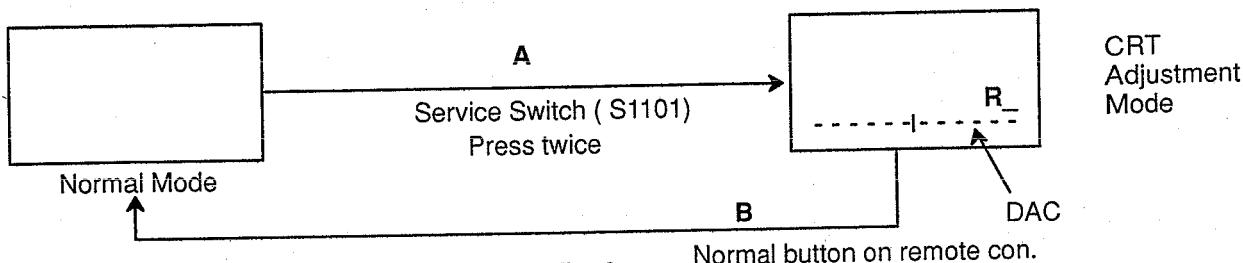


Fig. 9a.

Normal button on remote con.

A: Press the Service Switch (S1101) twice. The TV in the Normal mode changes to the CRT Adjustment mode.

Press the Function button (S1103) to select the required adjustment to be adjusted as shown in Fig. 9a.
(Please refer to procedure on page 12).

Press the Volume "up" or "down" button (S1110 & S1111) to change the DAC level.

B: Press the Normal button on the remote control transmitter twice to return to Normal mode.

The White Balance Adjustment mode.

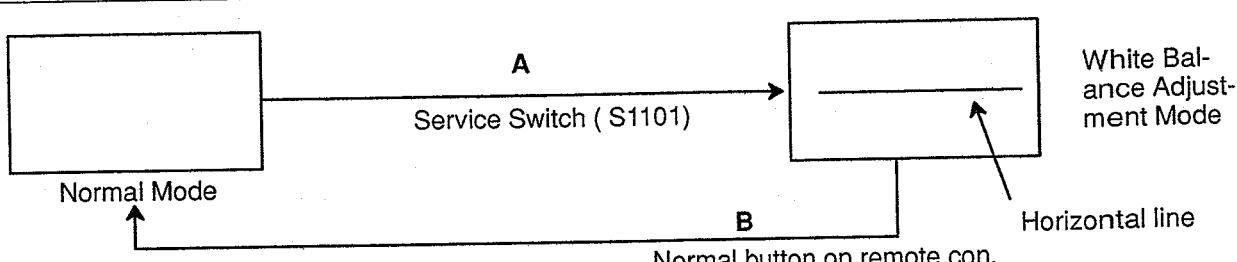


Fig. 9b

Normal button on remote con.

A: Press the Service Switch (S1101) twice. The TV in the Normal mode changes to the CRT Adjustment mode.
Then press the Service Switch once more to enter White Balance Adjustment mode.

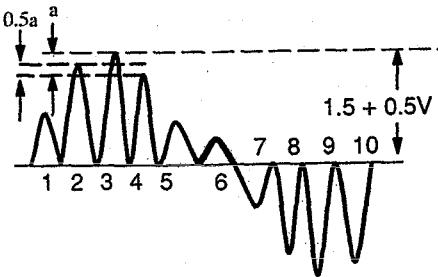
(Please refer to procedure on page 12).

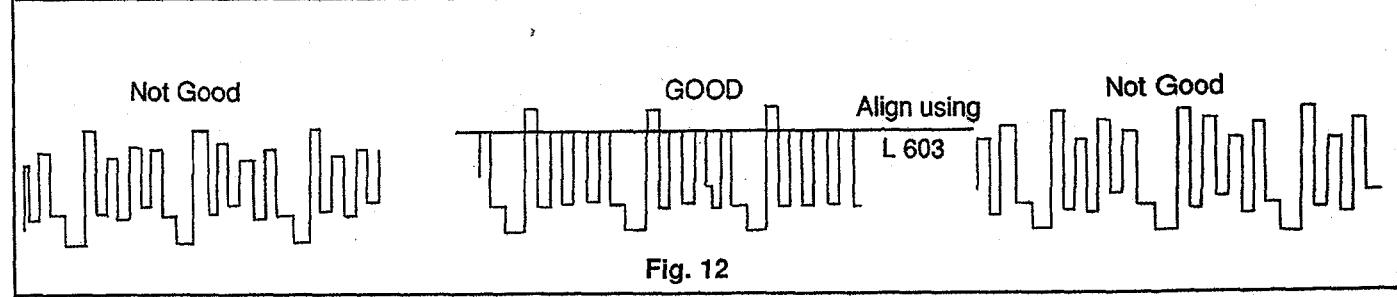
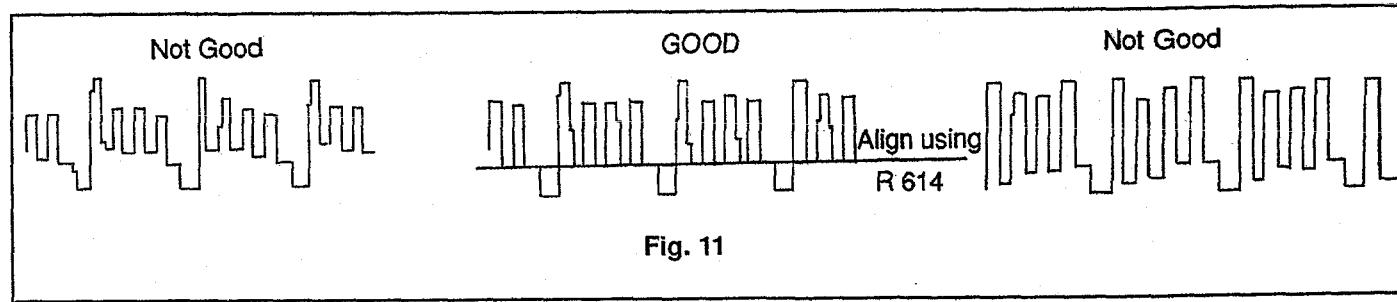
Press the Volume "up" or "down" button (S1110 & S1111) to change the DAC level.

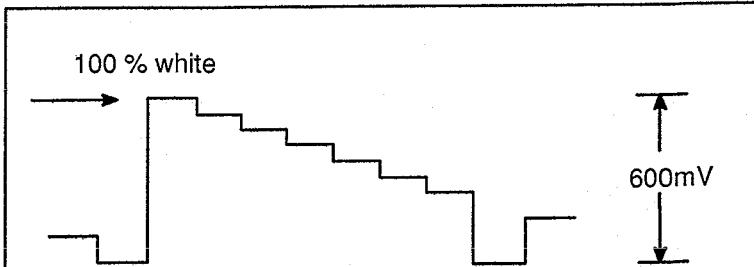
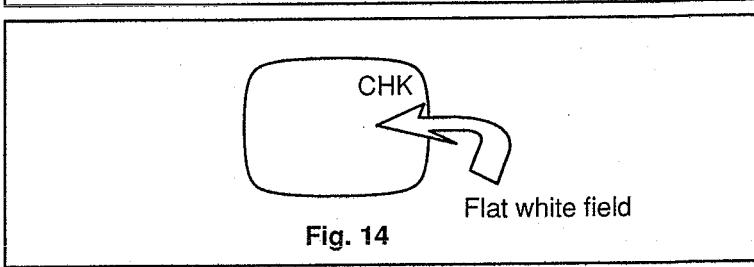
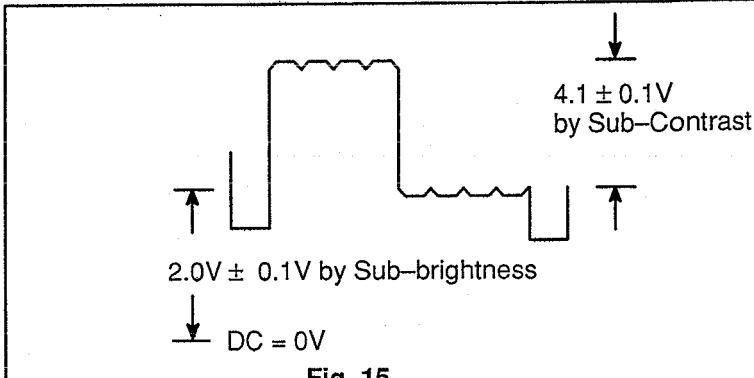
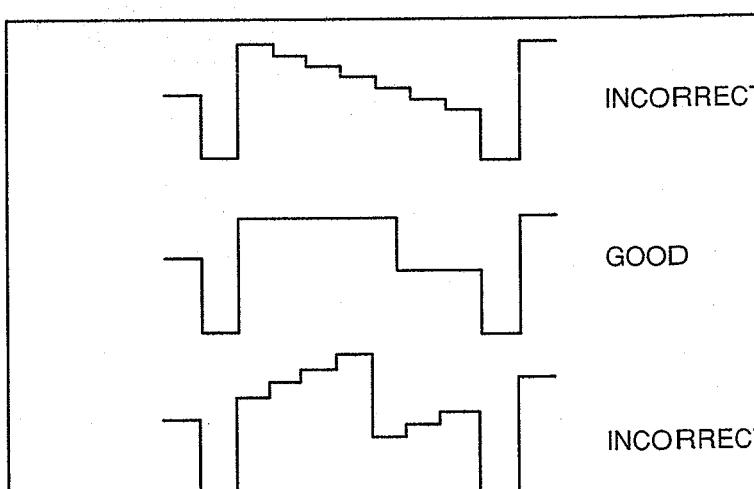
B: Press the Normal button on the remote control transmitter twice to return to Normal mode.

Adjustment Procedure

Item / Preparation	Adjustment Procedure
B Voltage 1. Operate the TV set. 2. Set control as follow: Brightness minimum Contrast minimum	Confirm the DC voltages at the indicated test points, as follow: Pin 1 IC803 : 142.0 ± 2.0 V TP8 : 12.0 ± 1.0 V TPE4 : 26.0 ± 1.5 V Pin-1 of E33 : 200.0 ± 15.0 V TP6 : 5.0 ± 0.5 V TP 9 : 9.0 ± 1.0 V
Tuning AFC and AFC offset 1. Operate the TV set and disconnect on aerial. 2. Connect a jumper lead between TPB 19 and TP8 to mute the normal tuning AFC. Connect a DC voltmeter to TPB 19 and earth 3. Connect a DC voltmeter to TPB 11.	1. Adjust tuning AFC Control (R144) for $2.75 (+0.1, -0.05)$ V. 2. Connect the DC voltmeter to TPB 11. 3. Adjust AFC offset control (R113) for $5.5V \pm 0.2$ at TPB 11.
RF AGC A. Workshop 1. Receive a colour bar signal at an RF level of 61 ± 2 dBuV ($289.9\mu V \pm 230.8\mu V$) with 75Ω loaded. 2. Connect an oscilloscope to TPB 12, set to DC mode. B. Field 1. Receive the television broadcast channel known to have the weakest RF signal strength.	1. Turn RF AGC control (R108) fully clockwise. 2. Slowly turn RF Control counterclockwise to set it at the point just before voltage at TPB 12 begins to drops. 1. Turn RF AGC control (R108) such as to produce a snowy picture. 2. Slowly turn back R108 off until the snow (picture noise) disappears. 3. Check the remaining broadcast channels for either snow or AGC overload and readjust R108 if necessary.
High Voltage 1. Operate the TV set. 2. Set controls as follow: Brightness minimum Contrast minimum	1. Connect a DC voltage meter to Pin 1 of IC803 and confirm the voltage is 142.0 ± 2.0 V. 2. Connect a high voltage meter to anode of the picture tube. 3. Confirm that the high voltage is within the range of $28.5 (+1.2, -1.5)$ kV. 4. Normalize the brightness and contrast.

Item / Preparation	Adjustment Procedure	Waveform
M-NTSC Sub-Tint Adjustment Apply NTSC rainbow pattern. Connect an oscilloscope to TP17. Connect a short jumper between TPE7 and TP10. Press S1104 colour system SW to NTSC 4.43. ColourNORMAL or CENTRE Bright NORMAL or CENTRE ContrastNORMAL or MAX. TintNORMAL or CENTRE Press SERVICE SW (S1101), then press S1103 (FUNC.) to Sub-Tint. Confirm CHK display on screen.	Confirm the amplitude of waveform: $1.5 \pm 0.5V$ 1. Set Colour control to maximum and confirm that the colour level is saturated enough. 2. Adjust Sub-Tint so that the peak level of waveform is similar to Fig. 10. 3. Press NORMAL (S1107), CHK should disappear from screen. 4. Confirm Colour max level at colour Max condition by colour control. Note: Use Remote control only when adjusting User Control.	 <p style="text-align: center;">Fig.10</p>
Delay Line 1. Receive a PAL colour bar signal. 2. Connect an oscilloscope to TP 18. 3. Normalize Colour and Contrast settings.	1. Adjust R614 to align the lower portion of the waveform shown in Fig. 11. 2. Adjust L603 to minimize the difference in levels between the higher portions of the waveform as shown in Fig. 12. Hint : At the correct R614/L603 alignment the waveform seem on the oscilloscope becomes "stable".	See below.



Item / Preparation	Waveforms
<p>Y-input, Sub-Contrast, Sub-Brightness and Sub-colour</p> <ol style="list-style-type: none"> Input a colour bar signal with white at 100% of peak level. Connection can be made via A/V and this may enable adjustment of the pattern generator video output level to obtain the correct black to white amplitude (at TPH 9). Confirm that the Sync tip to white amplitude is $600\text{mV} \pm 40\text{mV}$ at TP15 (under IC601) and adjust R325 to achieve this level if necessary, as shown in Fig. 13. Receive a colour bar pattern. Connect an oscilloscope to pin 3 of plug Y32 on the Y-PCB (on the CRT neck) and chassis earth. Set Colour, Brightness and Contrast to Normal (Colour and Brightness at centre, Contrast at max.) Connect a short jumper between TPE7 and TP10 (chassis). Note that this step disable the ABL, so avoid operation in this condition for long periods at high beam current. Press the Service Switch (S1101). The screen should then show a flat whitish field, with the OSD message "CHK" possibly visible at the top as shown in Fig. 14. Press the Function button (S1103) to select the required function to be adjusted (in this case "Contrast"). Now press either the Volume " up or down " buttons (S1110 or S1111). "S" and "Contrast" will be displayed on the screen, indicating "Sub" Contrast, and the Sub-Contrast level will be changed. Note that the Volume " up or down " buttons must be pressed while the Function (i.e. Contrast) OSD is still on screen. Press the Function button (S1103) to select Brightness and then the Volume " up or down " buttons (S1110 or S1111) will similarly permit Sub-Brightness to be altered and adjusted. Adjust the Sub-Brightness (first) and Sub-Contrast (second) to produce the waveform shown in Fig. 15. Using the Function button (S1103) and Volume " up and down " buttons (S1110 and S1111). Select Sub-colour and adjust to produce the waveform shown in Fig. 16. Cancel the "CHK" mode by pressing the Normal button twice on remote control transmitter and remove the TPE7 to TP10 jumper. 	 <p>Fig. 13</p>  <p>Fig. 14</p>  <p>Fig. 15</p>  <p>Fig. 16</p>

ADJUSTMENTS PROCEDURE FOR WHITE BALANCE

Item / Preparation	Adjustment Procedure																								
CRT CUT-OFF																									
<p>1. Input a flat white Field signal, and set Contrast to minimum.</p> <p>2. Connect an oscilloscope to TPY 1 (Green CRT drive) and TPY 2 (Ground). TPY 1 and TPY 2 are located on the Y-PCB (CRT neck panel).</p> <p>3. Push the Service Switch (S1101) TWICE to select CRT ADJUSTMENT Mode (shown in Fig. 9a on page 7). " CHK " will appear on the screen.</p> <p>4. Press the Function button (S1103), FOUR times to select " BR " (meaning " brightness "). Note that repeated pushing of the Function button cycles through the CRT adjustment as shown in Fig. 16.</p> <p>5. WHILE " BR " IS STILL ON SCREEN, set the screen control to minimum by turning it anti-clockwise, and use the Volume " up " or " down " button - (S1110) and S1111) to set the DC=0V to video level at 160V, as shown in Fig. 17.</p> <p>6. Advance the screen control sufficiently to see the OSD. WHILE " BR " IS STILL ON SCREEN, (push the Function button to bring it up again if necessary), push the Service Switch (S1101) again. This will collapse the vertical scan.</p> <p>7. Slowly adjust the screen control such that one of the R, G or B beams just appears, across the centre of the screen, (Fig. 19). THIS IS THE SETTING POINT FOR THE SCREEN CONTROL. Note which colour appeared, and DO NOT ADJUST THE LOW-LIGHT SETTING FOR THIS PARTICULAR COLOUR IN THE FOLLOWING PROCEDURE.</p>	<table border="1" data-bbox="651 356 1396 769"> <thead> <tr> <th data-bbox="651 356 962 379">PRESS S1103</th><th data-bbox="962 356 1095 379">OSD</th><th data-bbox="1095 356 1396 379">MEANING</th></tr> </thead> <tbody> <tr> <td data-bbox="651 379 962 424">1</td><td data-bbox="962 379 1095 424">R_</td><td data-bbox="1095 379 1396 424">RED LOWLIGHT</td></tr> <tr> <td data-bbox="651 424 962 469">2</td><td data-bbox="962 424 1095 469">G_</td><td data-bbox="1095 424 1396 469">GREEN LOWLIGHT</td></tr> <tr> <td data-bbox="651 469 962 514">3</td><td data-bbox="962 469 1095 514">B_</td><td data-bbox="1095 469 1396 514">BLUE LOWLIGHT</td></tr> <tr> <td data-bbox="651 514 962 559">4</td><td data-bbox="962 514 1095 559">BR</td><td data-bbox="1095 514 1396 559">SUB BRIGHTNESS</td></tr> <tr> <td data-bbox="651 559 962 604">5</td><td data-bbox="962 559 1095 604">R</td><td data-bbox="1095 559 1396 604">RED HIGHLIGHT</td></tr> <tr> <td data-bbox="651 604 962 650">6</td><td data-bbox="962 604 1095 650">B</td><td data-bbox="1095 604 1396 650">BLUE HIGHLIGHT</td></tr> </tbody> </table>	PRESS S1103	OSD	MEANING	1	R_	RED LOWLIGHT	2	G_	GREEN LOWLIGHT	3	B_	BLUE LOWLIGHT	4	BR	SUB BRIGHTNESS	5	R	RED HIGHLIGHT	6	B	BLUE HIGHLIGHT			
PRESS S1103	OSD	MEANING																							
1	R_	RED LOWLIGHT																							
2	G_	GREEN LOWLIGHT																							
3	B_	BLUE LOWLIGHT																							
4	BR	SUB BRIGHTNESS																							
5	R	RED HIGHLIGHT																							
6	B	BLUE HIGHLIGHT																							

Item / Preparation	Adjustment Procedure
<p>R, G, B LOW LIGHT ADJUSTMENT</p> <ol style="list-style-type: none"> 8. Complete steps 1 to 7 of the CRT cut-off procedure, and do not adjust the screen control from here on. 9. Press the Service Switch (S1101) to return to full field scan, and use the Function Switch (S1103) to select the lowlight setting for one of the two colour (R, G or B) that did not appear at step 7. Fig. 16 shows the selection sequence of the Function Switch (S1103). 10. With the R, B, or G OSD still on screen, press the Service Switch again to collapse the vertical scan. 11. Use the Volume " up " and " down " buttons (S1110 and S1111) to match the levels of the two colours now on screen. 12. Repeat Steps 9 to 11 for the remaining colour, to achieve a white line on screen. 13. Press the Service Switch (S1101) to return to full frame scan. <p>R, B HIGH LIGHT ADJUSTMENT</p> <ol style="list-style-type: none"> 14. Press the Normal Button (S1107) to return to Normal Mode, after completing the preceding CRT cut-off and lowlight adjustments. 15. Set Contrast to Normal (max.), and continue using the flat white field input as per Step 1. 16. Press the Service Switch (S1101) TWICE. 17. Use the Function Button (S1103) to select R (red highlight) and B (blue highlight) as necessary (refer to Fig. 17 for the Function Button sequence). 18. With R or B STILL ON SCREEN, press the Volume " up " and " down " buttons (S1110 and S1111) as necessary to achieve a uniform white field. 19. Press the Normal Button (S1107) to return to Normal Mode. 20. Input a greyscale pattern, and confirm correct lowlight and highlight white balance. 	<p>EXAMPLE: If a green line appeared at Step 7.</p> <pre> graph TD A[Service SW (S1101)] --> B[Function (S1103) to select R_] A --> C[Function (S1103) to select B_] B --> D[Service SW (S1101)] C --> E[Service SW (S1101)] D --> F[Volume ▲ or ▼] E --> F F --> G[White line on screen after the R,G,B lowlight adjustment.] G --> H[Service SW (S1101)] H --> I[Service SW (S1101)] I --> J[Repeat for the remaining colour.] J --> K[Service SW (S1101)] K --> L[Repeat the procedure if necessary to improve white balance of the collapsed field line.] L --> M[Service SW (S1101)] M --> N[Normal (S1107)] N --> O[Service SW (S1101) TWICE] O --> P[Normalise Contrast] P --> Q[Service SW (S1101) TWICE] Q --> R[Function (S1103) to select R_] Q --> S[Function (S1103) to select B_] R --> T[Volume ▲ or ▼] S --> T T --> U[UNIFORM WHITE] U --> V[Normal (S1107)] V --> W[NORMAL MODE] </pre>

*Before Colour Purity, Convergence and White Balance adjustments are attempted,
V. Height, H. Centre and Focus adjustments must be completed.*

Colour Purity

1. Set the Brightness and Contrast controls to their maximum positions.
2. Operate the TV set for 30 minutes.
3. Fully degauss the picture tube by using an external degaussing coil.
4. Apply a crosshatch pattern signal and adjust the static convergence magnets to the approximately correct position.
5. Receive a black and white signal.
6. Set the controls as following :

Red	minimum
Green	maximum
Blue	minimum

 Push the Service Switch (S1101) twice to select CRT Adjustment Mode and then the Function button (S1103) as per Fig. 17 to select low lights.
7. Loosen the clamp screw for the deflection yoke A in Fig. 25 and move the deflection yoke as close to the purity magnet as possible.
8. Adjust the purity magnetic rings so that a vertical green field is obtained at the centre of the screen.

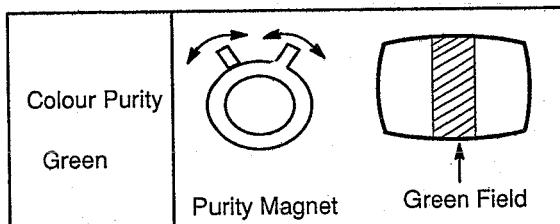


Fig. 21

9. Slowly push the deflection yoke and set it where a uniform green field is obtained.

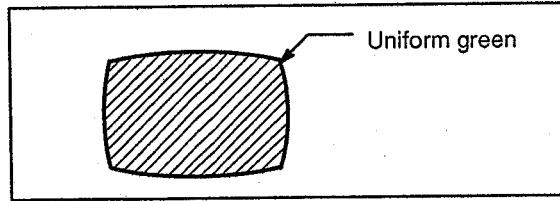


Fig. 22

10. Re-adjust the Low Light controls to their correct settings and make sure that a uniform white field is obtained.
11. Tighten the clamp screw A in Fig. 25.

Convergence

1. Apply a crosshatch pattern signal and Normalise Contrast control to the maximum position.
2. Adjust Brightness until the grey portion of the crosshatch pattern just becomes black.
3. Adjust the Red and Blue line at the centre of the screen by rotating the R-B static convergence magnetic rings.

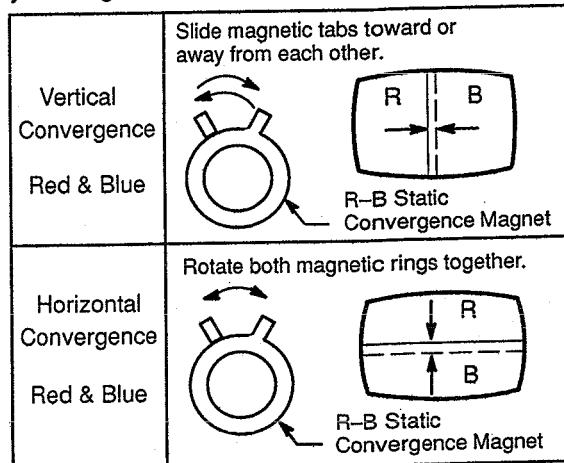


Fig. 23

4. Adjust Red and Blue with the Green line at centre of the screen by rotating (RB) - G static convergence magnetic rings.
5. Lock convergence magnets with silicone sealer.
6. Remove the DY wedges and slightly tilt the deflection yoke vertically and horizontally to obtain the good overall convergence.

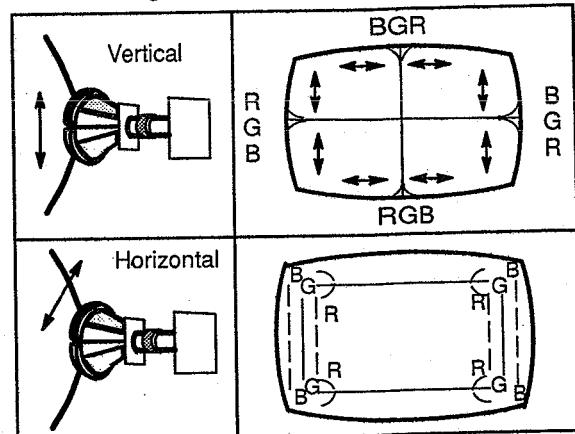


Fig. 24

7. Fix the deflection yoke by re-inserting the DY wedges. Refer to Fig. 25.
8. If purity error is found, repeat "Colour Purity" adjustment.

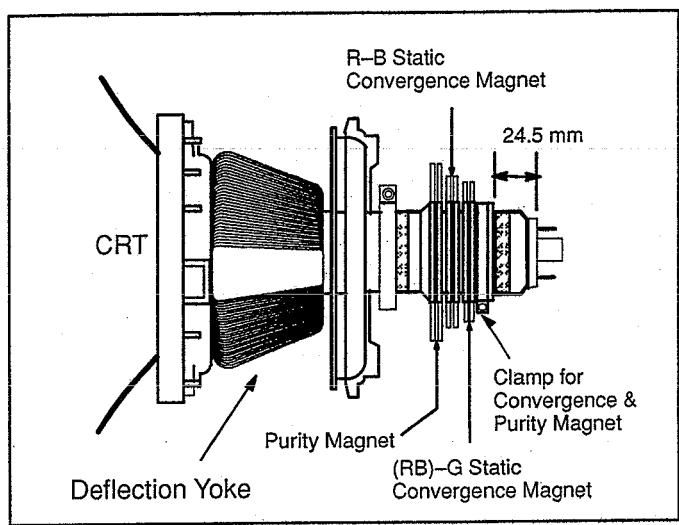


Fig. 24

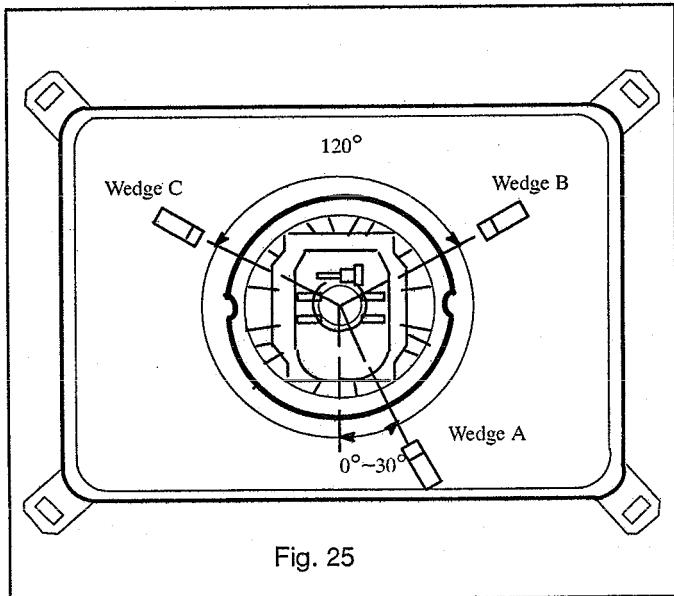


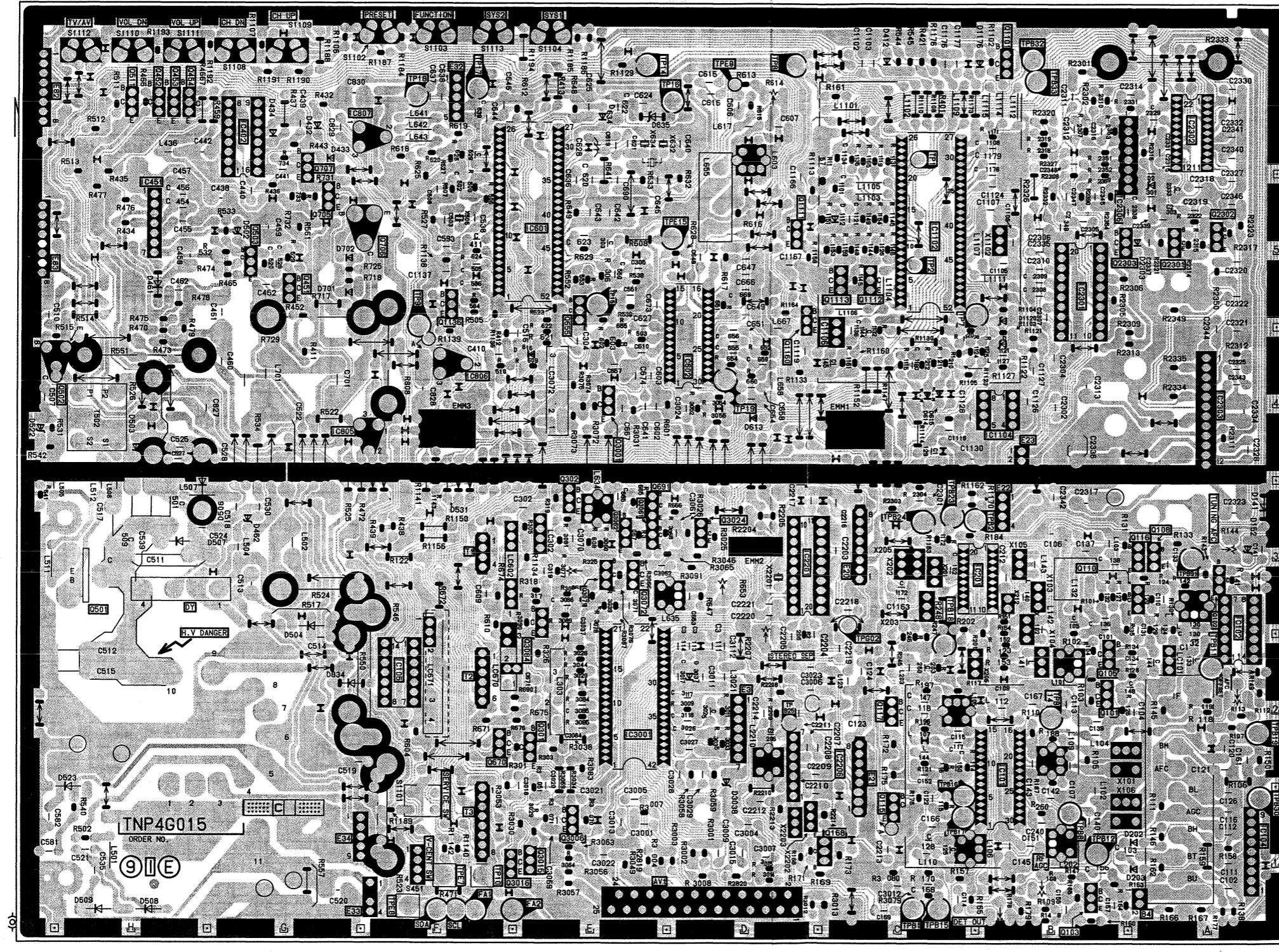
Fig. 25

Notes :

1. Wedge A shown in Fig. 25 should be fixed within a range of 0° - 30° to the right of the vertical line as shown.
2. After inserting wedge A, insert wedges B and C. The wedges should be set 120° apart from each other.
3. Be certain that the four wedges are firmly fixed and the Deflection Yoke is tightly clamped in place. Otherwise the Deflection Yoke may shift its position and cause a loss of convergence and purity.

CONDUCTOR VIEWS

E-BOARD TNP4G015BA

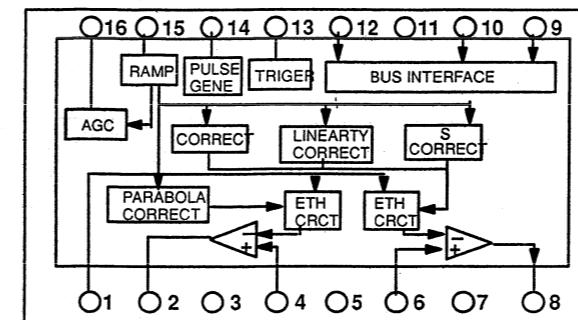
6
5
4
3
2
1
0

PARTS LOCATION

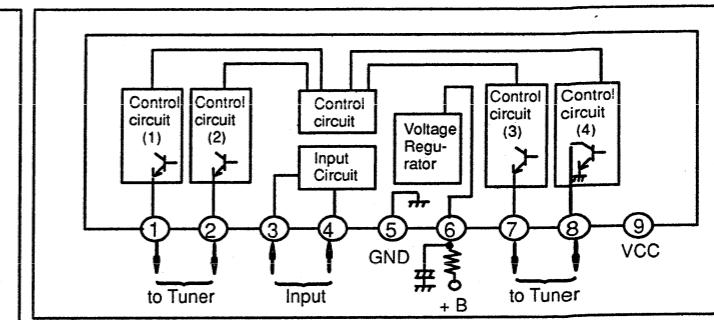
E-BOARD	
IC	Test points
IC451	TPE4
IC402	TPE8
IC105	TP9
IC805	TP18
IC806	TP17
IC807	TP15
IC3001	TP19
IC601	TPE14
IC602	TPE15
IC2206	TPE16
IC2201	TPB25
IC1106	TPB1
IC101	TPG02
IC201	TPB24
IC-1104	TP2
IC1102	TP1
IC2301	TPB15
IC104	TPB17
IC102	TPB16
IC2303	TPB18
IC2306	TPB23
IC2302	TPB2
	TP7
	TPB12
	TPB8
	TPB14
	TPB32
	TPB33
	TPB30
	TPB19
	TPB11
	TPB91

TRANSISTORS	Test points
Q501	B2
Q502	C1
Q511	C5
Q452	C5
Q453	D4
Q454	D4
Q503	E2
Q451	E3
Q707	E5
Q705	F4
Q706	F5
Q1136	F1
Q3016	F2
Q3015	F3
Q670	F4
Q301	G1
Q3084	G2
Q3006	G3
Q3071	G1
Q3072	G2
Q3062	G3
Q3061	D3
Q302	D3
Q691	D3
Q3024	D3
Q168	E1
Q115	E2
Q117	E4
Q1160	E4
Q1113	E4
Q1112	E4
Q1111	E4
Q103	F1
Q101	F2
Q105	F5
Q1101	F5
Q108	G3
Q116	G3
Q2303	G4
Q2301	G4
Q2302	G5
Q102	G3

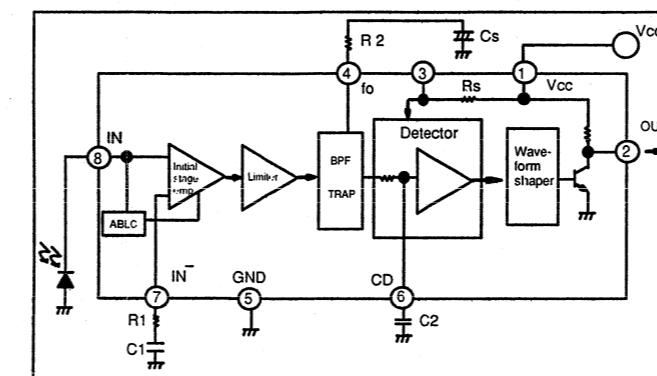
Block Diagram for Integrated Circuits



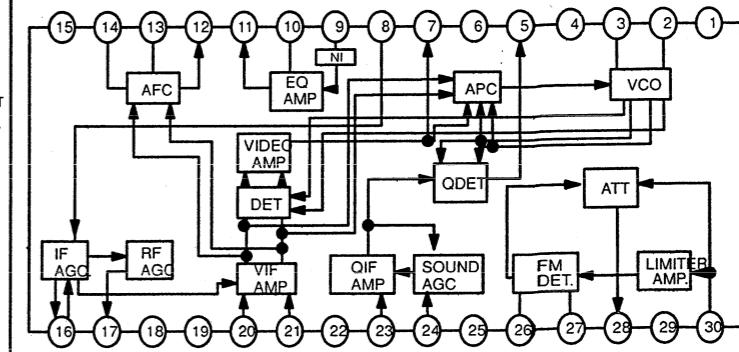
IC402 (TA 8859P)



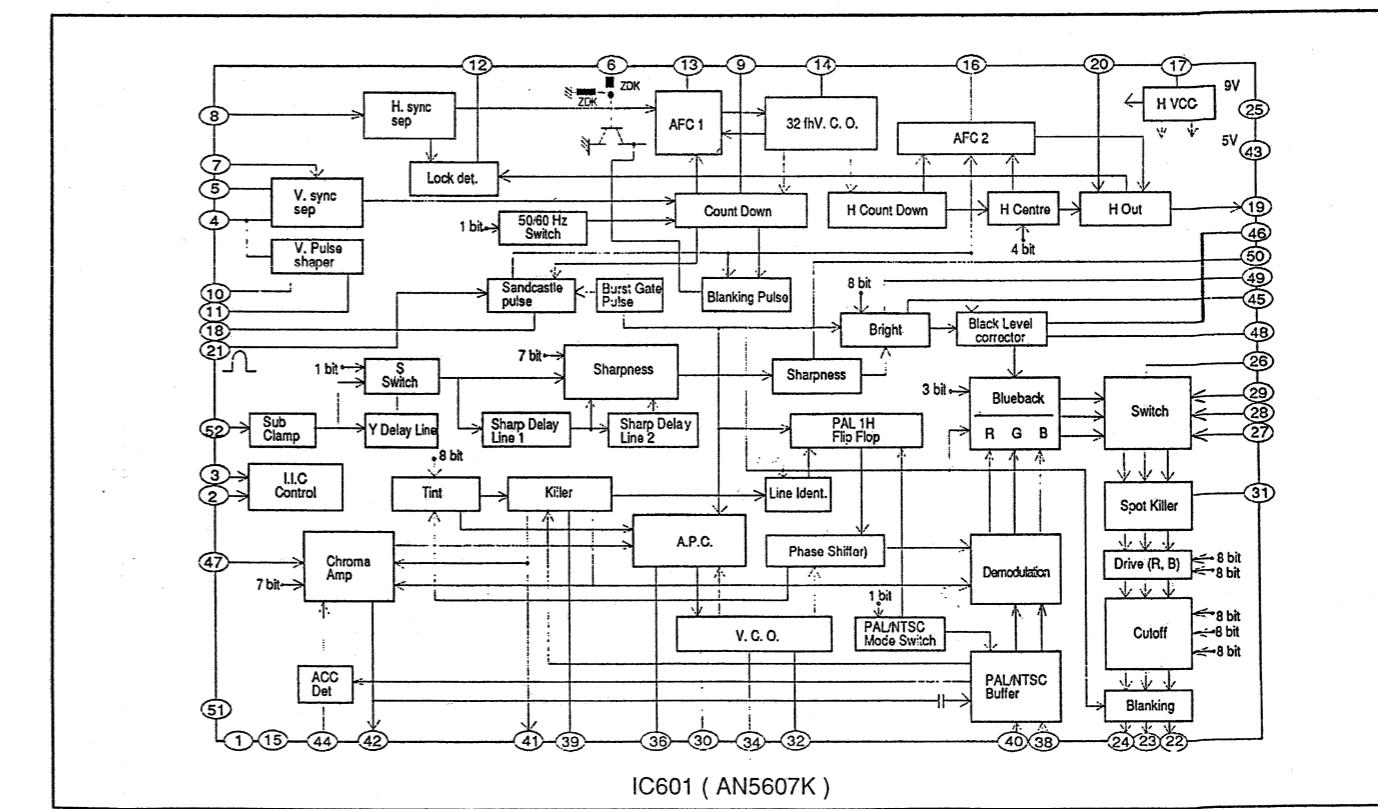
IC1103 (AN5071)



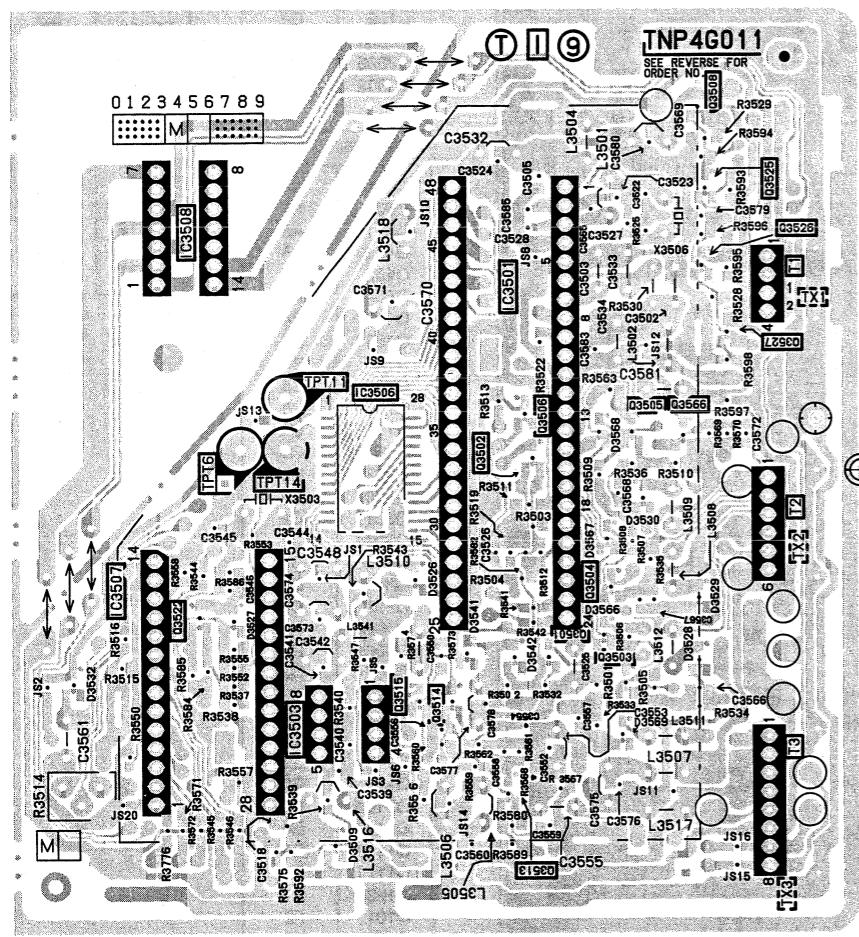
IC1201 (UPC2801AHA)



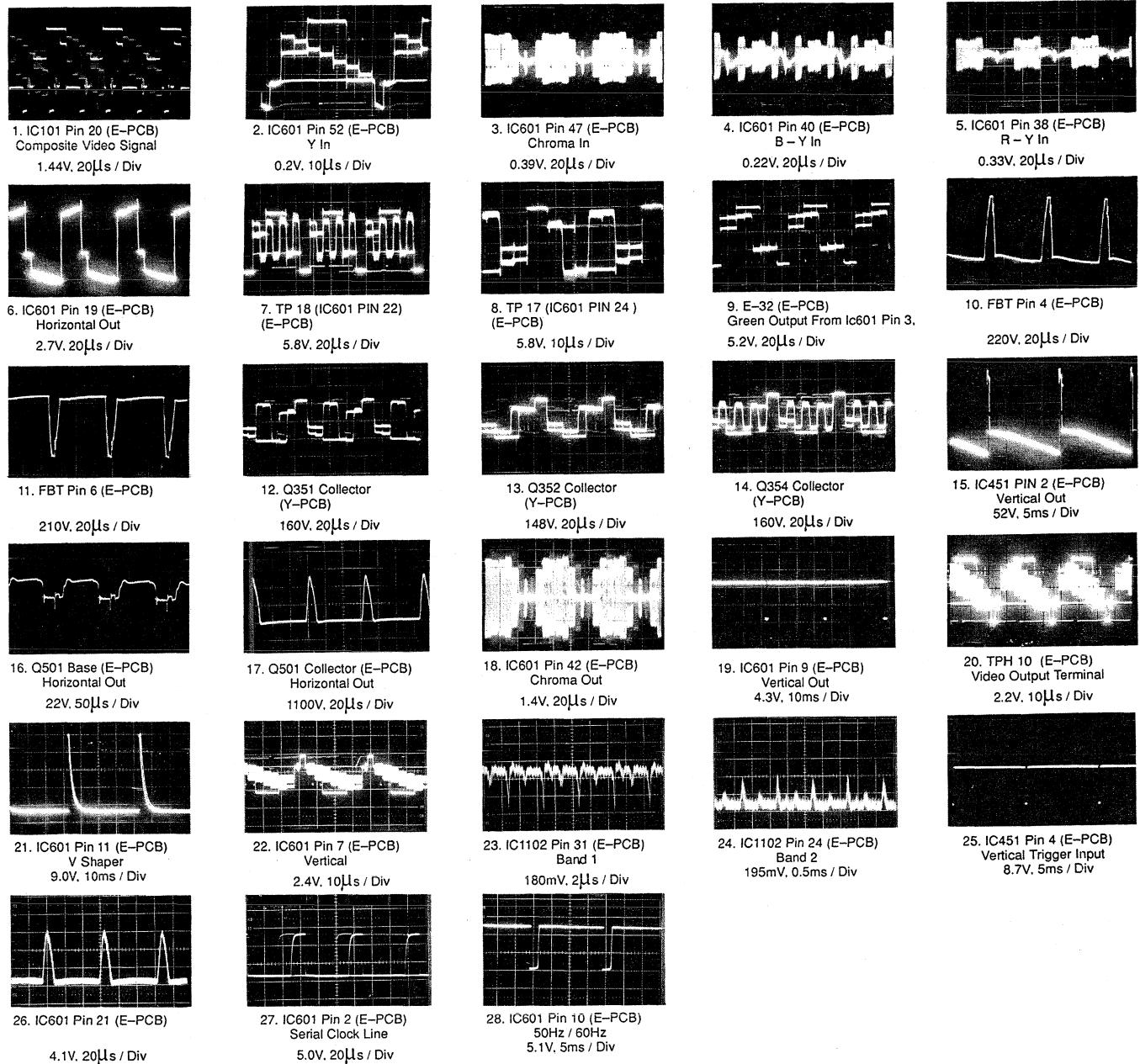
IC101 (AN5179NK)



IC601 (AN5607K)



TEST POINT WAVEFORMS



TEST POINT VOLTAGES

PART	PIN	VOLTAGES	COMMENTS	PART	PIN	VOLTAGES	COMMENTS
IC1102	4	0V	AUTO, AV IN, NTSC 4.43	IC1102	19	4.9V	AUTO, AV IN, PAL
IC1102	4	0V	AUTO, AV IN, SECAM	IC1102	19	4.9V	B/W
IC1102	4	0V	AUTO, AV IN, PAL	IC1102	23	4.8V	AUTO, AV IN, NTSC 4.43
IC1102	4	0V	B/W	IC1102	23	0V	AUTO, AV IN, SECAM
IC1102	17	4.7V	AUTO, AV IN, NTSC 4.43	IC1102	23	4.8V	AUTO, AV IN, PAL
IC1102	17	4.4V	AUTO, AV IN, SECAM	IC1102	23	4.8V	B/W
IC1102	17	4.4V	AUTO, AV IN, PAL	IC1102	51	4.9V	AUTO, AV IN, NTSC 4.43
IC1102	17	4.4V	B/W	IC1102	51	0.1V	AUTO, AV IN, SECAM
IC1102	19	4.9V	AUTO, AV IN, NTSC 4.43	IC1102	51	4.9V	AUTO, AV IN, PAL
IC1102	19	4.9V	AUTO, AV IN, SECAM	IC1102	51	4.9V	B/W

Schematic Diagram for models TX-21GF10M/Z (MX-2 Chassis)

Important Safety Notice

Components identified by \triangle mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Notes :

1. Resistor

All resistors are carbon 1/4W resistor, unless marked as follows :

Unit of resistance is OHM [Ω] (K=1.000 , M=1.000.000).

	: Nonflammable
	: Solid
	: Wire Wound

	: Metal Oxide
	: Metal Film
	: Fuse

2. Capacitor

All capacitors are ceramic 50V capacitor, unless marked as follows :

Unit of capacitance is μF , unless otherwise noted.

	: Temperature Compensation
	: Polyester
	: Metallized Polyester
	: Polypropylene

	: Electrolytic
	: Bipolar
	: Dipped Tantalum
	: Z-Type

3. Coil

Unit of inductance is μH , unless otherwise noted.

4. Test Point

	: Test Point position
--	-----------------------

5. Earth Symbol

	: Chassis Earth (Cold)
	: Line Earth (Hot)

6. Voltage Measurement

Voltage is measured by a DC voltmeter.

Conditions of the measurement are the following :

Power Source	AC 220V, 50Hz
Receiving Signal	Colour Bar signal (RF)
All customer's controls	Maximum positions

7. Number in red circle indicates waveform number.

(See waveform pattern table.)

8. When arrow mark (\nearrow) is found, connection is easily found from the direction of arrow.

9. : Indicates the major signal flow.

10. This schematic diagram is the latest at the time of printing and subject to change without notice.

Remarks :

1. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection.

The circuit is defined by HOT and COLD indications in the schematic diagram. Take the following precautions.

All circuits, except the Power Circuit, are cold.

Precautions

- a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
- b. Do not short-circuit the hot and cold circuits or a fuse may blow and parts may break.
- c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow. Connect the earth of instruments to the earth connection of the circuit being measured.
- d. Make sure to disconnect the power plug before removing the chassis.

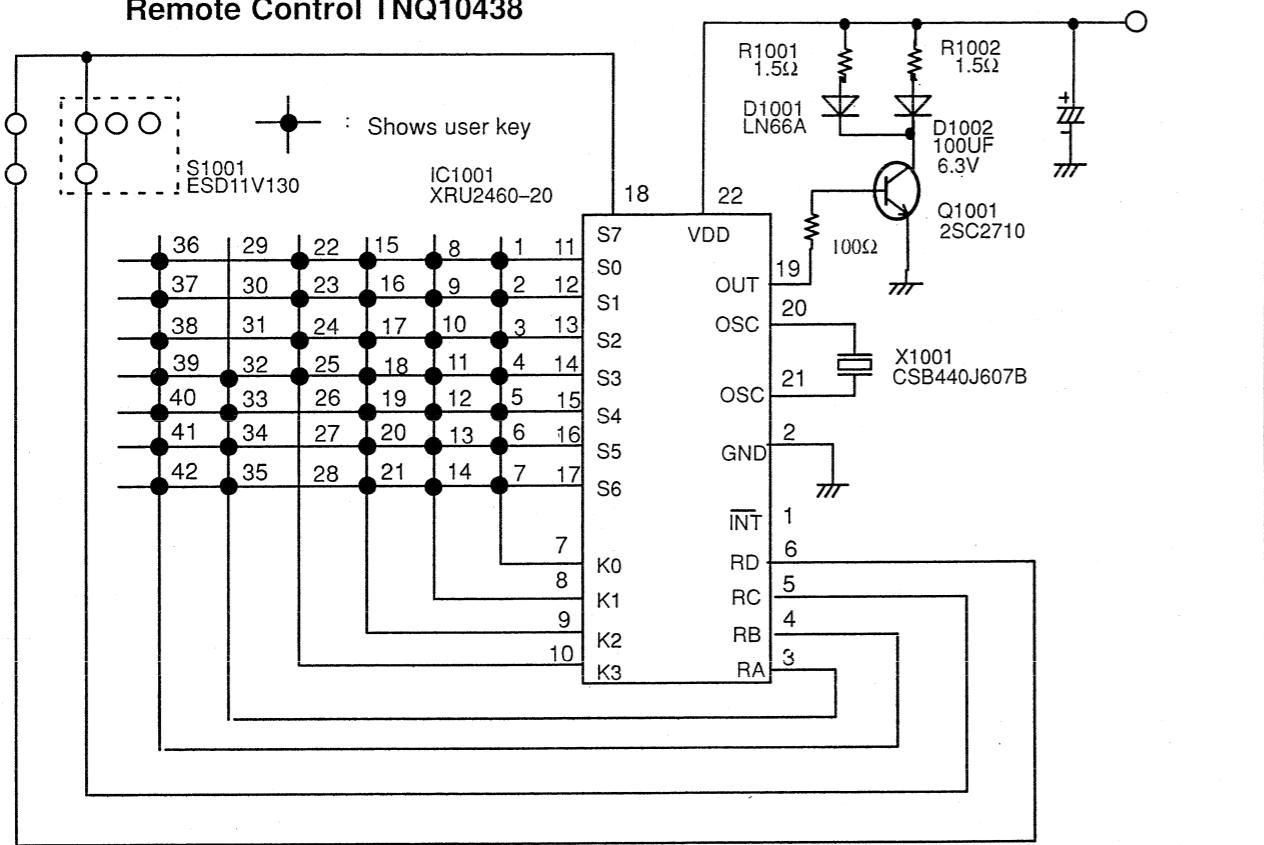
2. Following diodes are interchangeable.

MA150 - MA162 (Replacement part)

TX-21GF10M/Z

TX-21GF10M/Z

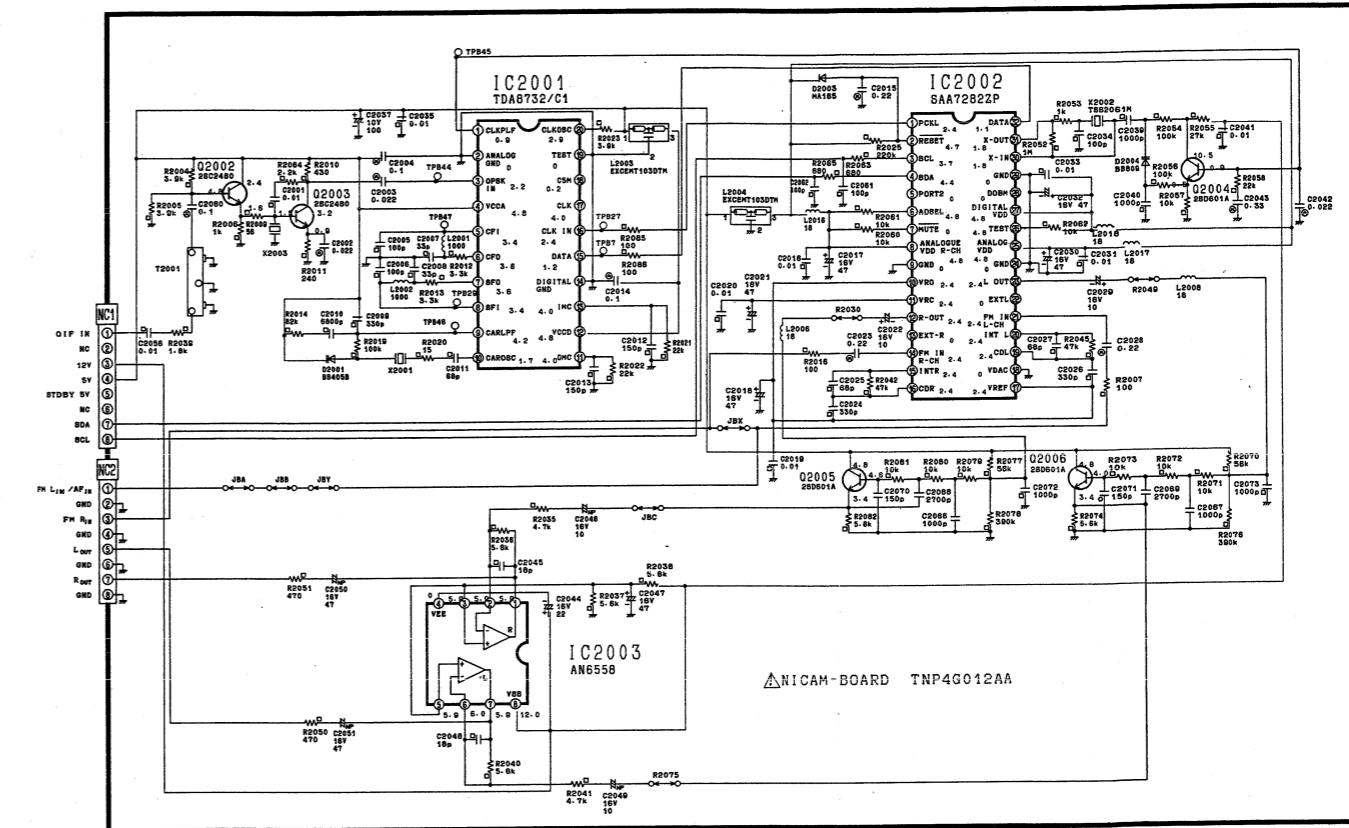
Remote Control TNQ10438



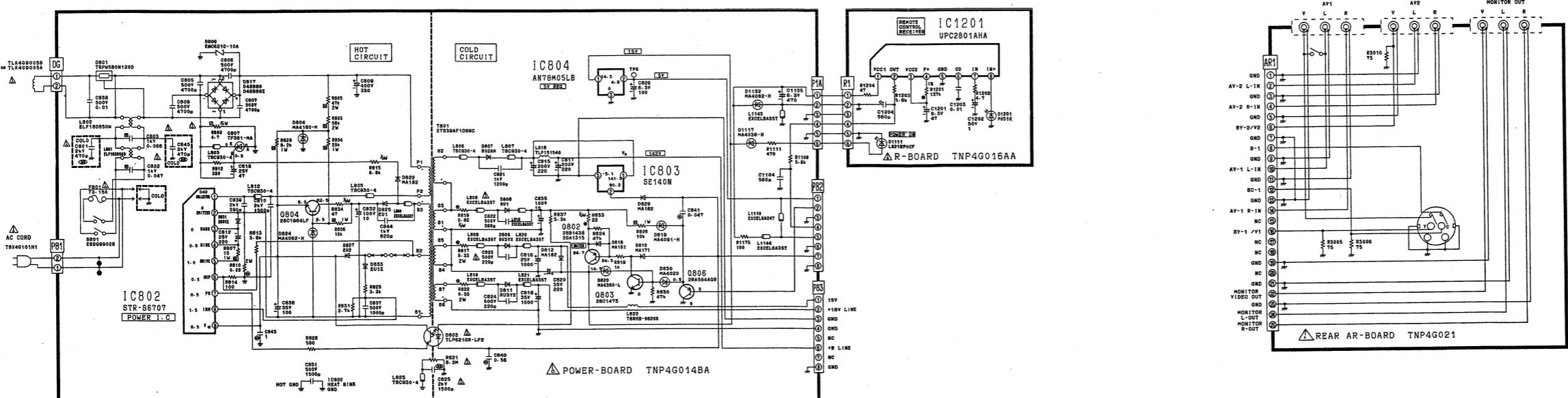
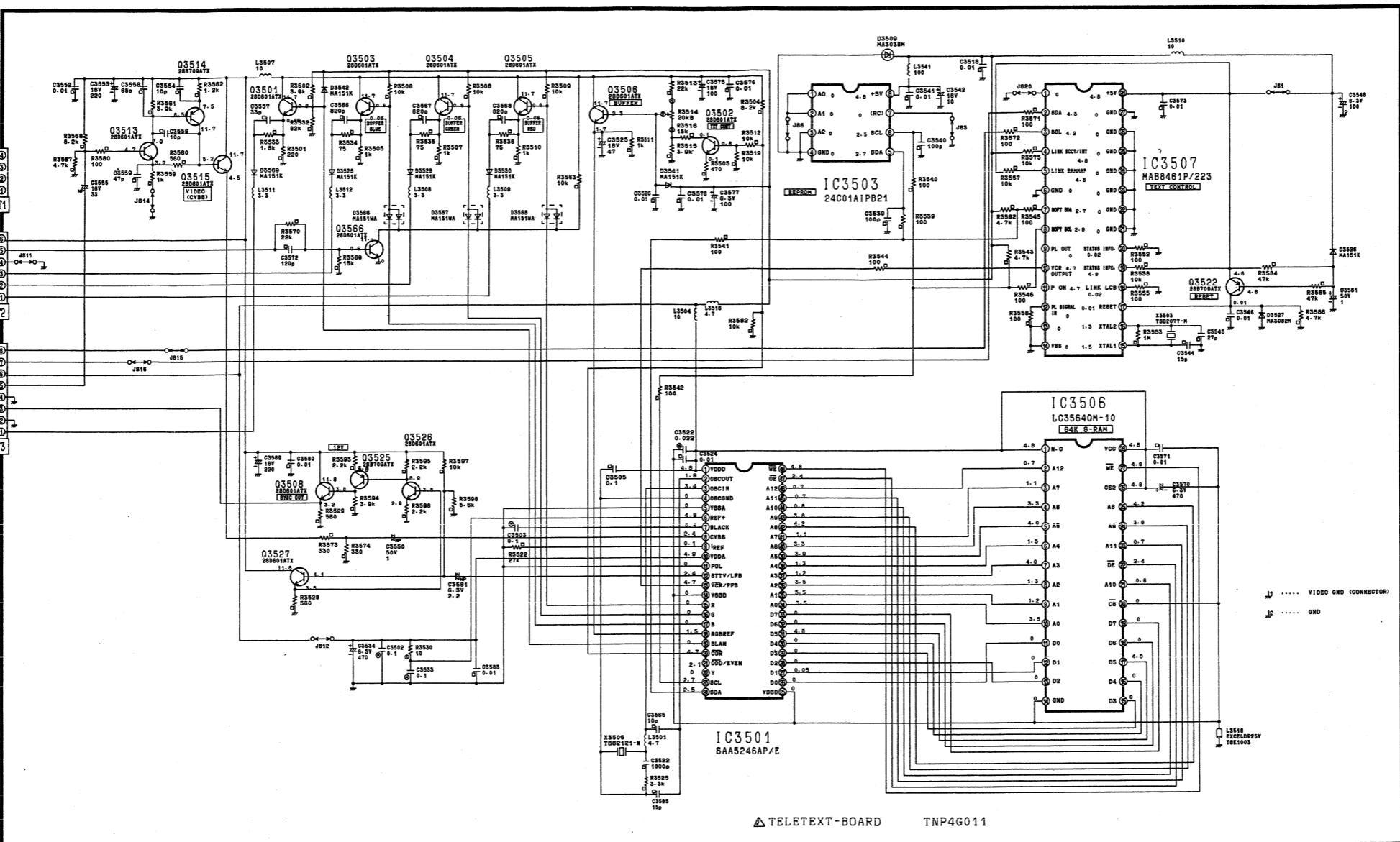
* Parts listed here are not suppliable.

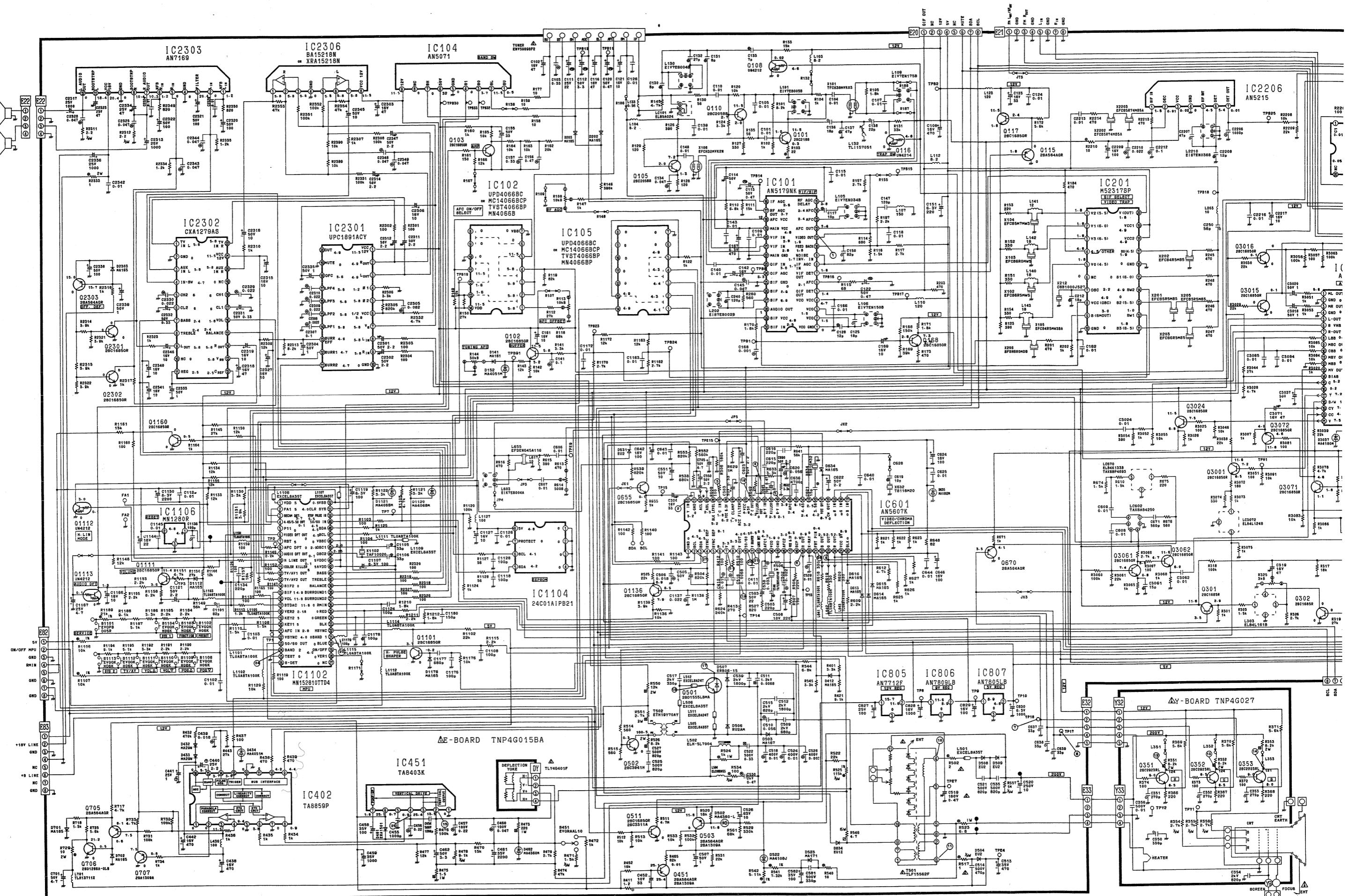
Fig.26

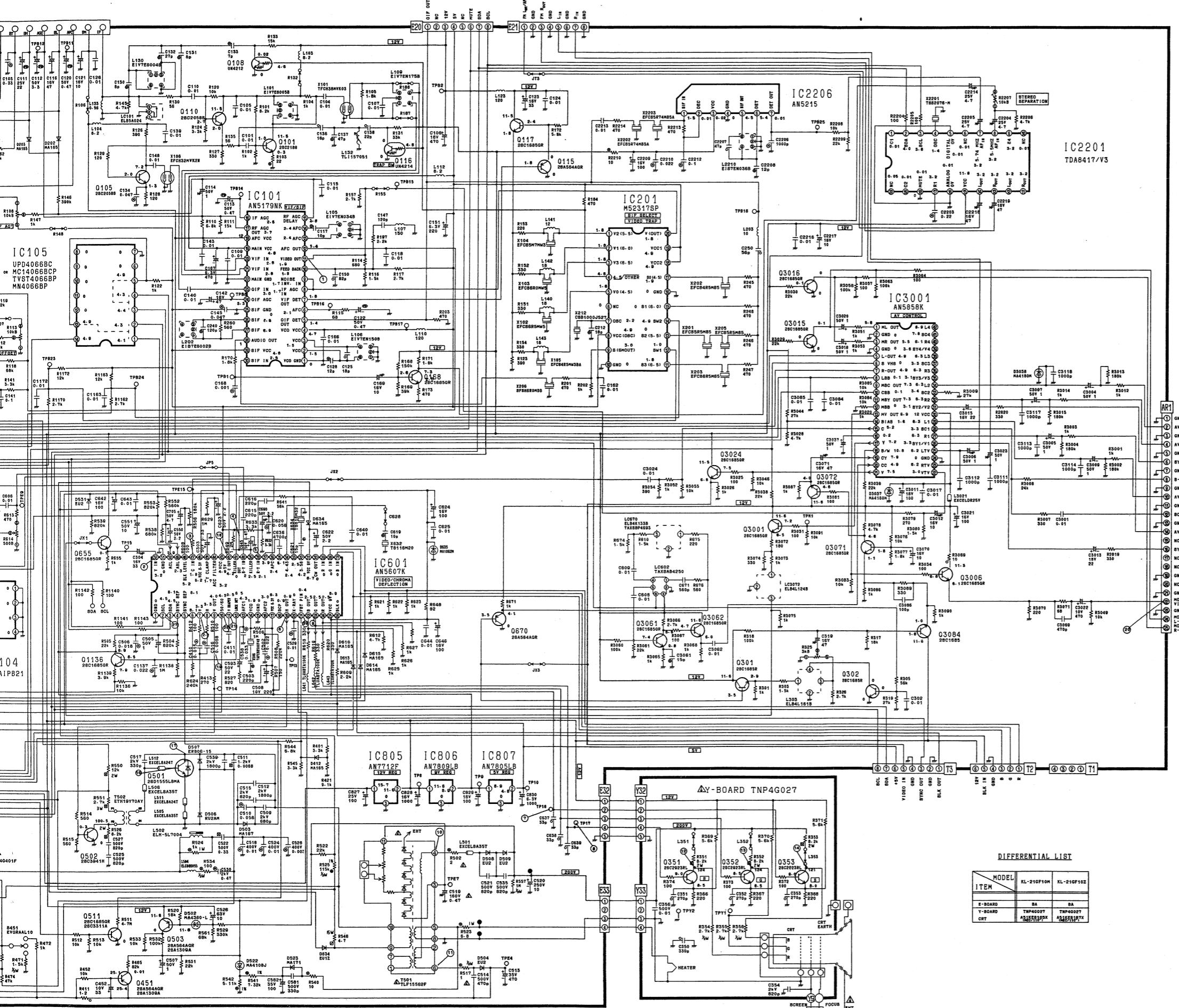
KEY NO.	FUNCTION	DATA CODE	KEY NO.	FUNCTION	DATA CODE
1	POWER	3D	22	CH UP	3B
2	TV/AV	05	23	CH DOWN	19
3	CH 1	10	24	SURROUND	31
4	CH 2	11	25	MPX CHANGE	33
5	CH 3	12	26	CURSOR UP	4A
6	CH 4	13	27	CURSOR DOWN	4B
7	CH 5	14	28	CURSOR LEFT	4E
8	CH 6	15	29	CURSOR RIGHT	4F
9	CH 7	16	30	PICTURE MENU	50
10	CH 8	17	31	SOUND MENU	51
11	CH 9	18	32	(VTR) POWER	3D
12	CH 10/0	19	33	(VTR) CH UP	34
13	—/—	3B	34	(VTR) CH DOWN	35
14	OFFTIMER	0F	35	(VTR) PLAY	0A
15	MUTE	32	36	(VTR) STOP	00
16	RECALL	39	37	(VTR) F.F	03
17	NORMAL	0C	38	(VTR) REW	02
18	FUNCTION	06	39	(VTR) PAUSE	06
19	SOUND FUNC.	07	40	(VTR) F.ADV	0C
20	VOL UP	20	41	(VTR) REC	08
21	VOL DOWN	21	42	(VTR) TV/VTR	36



TX-21GF10M/Z





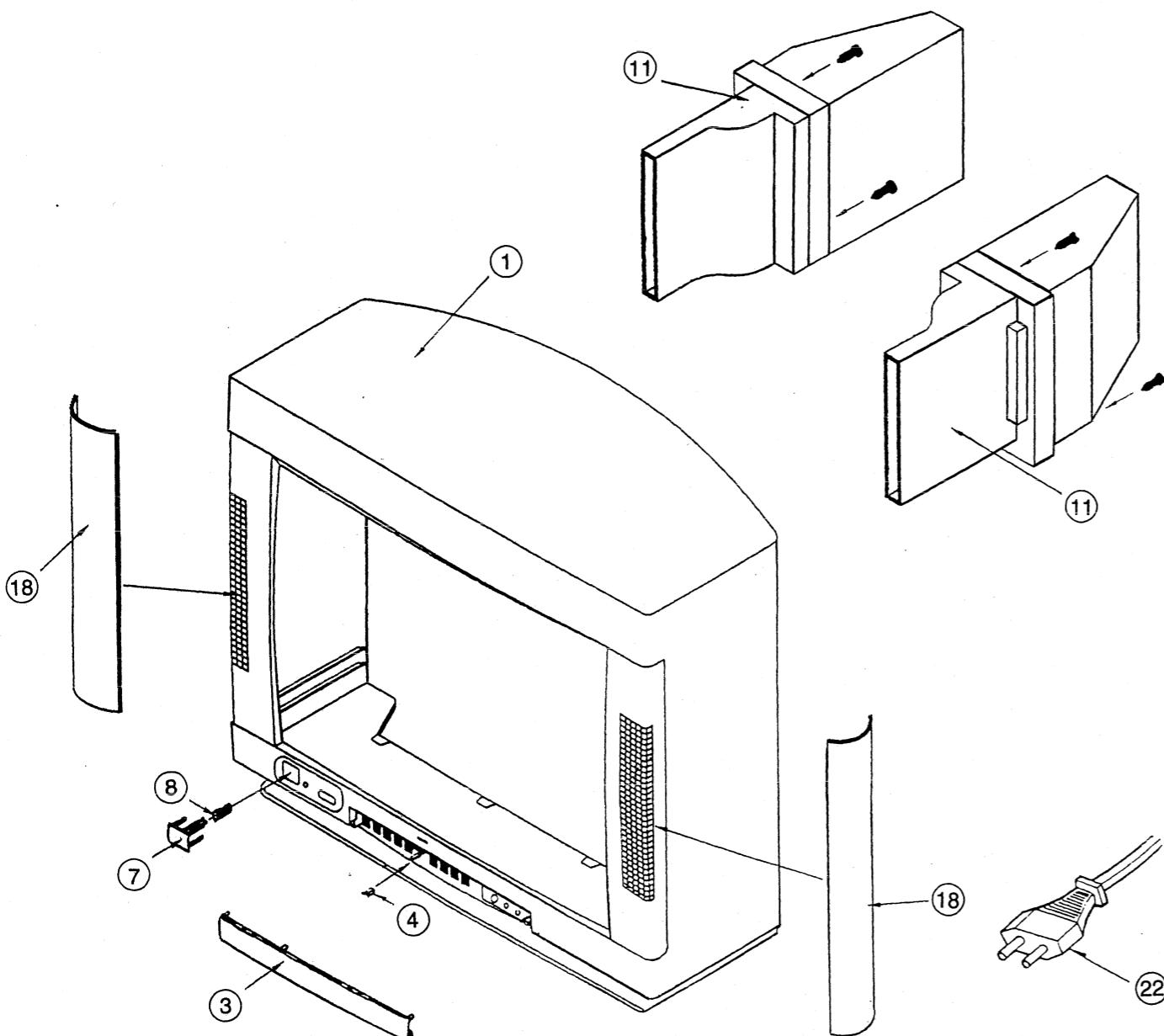


DIFFERENTIAL LIST

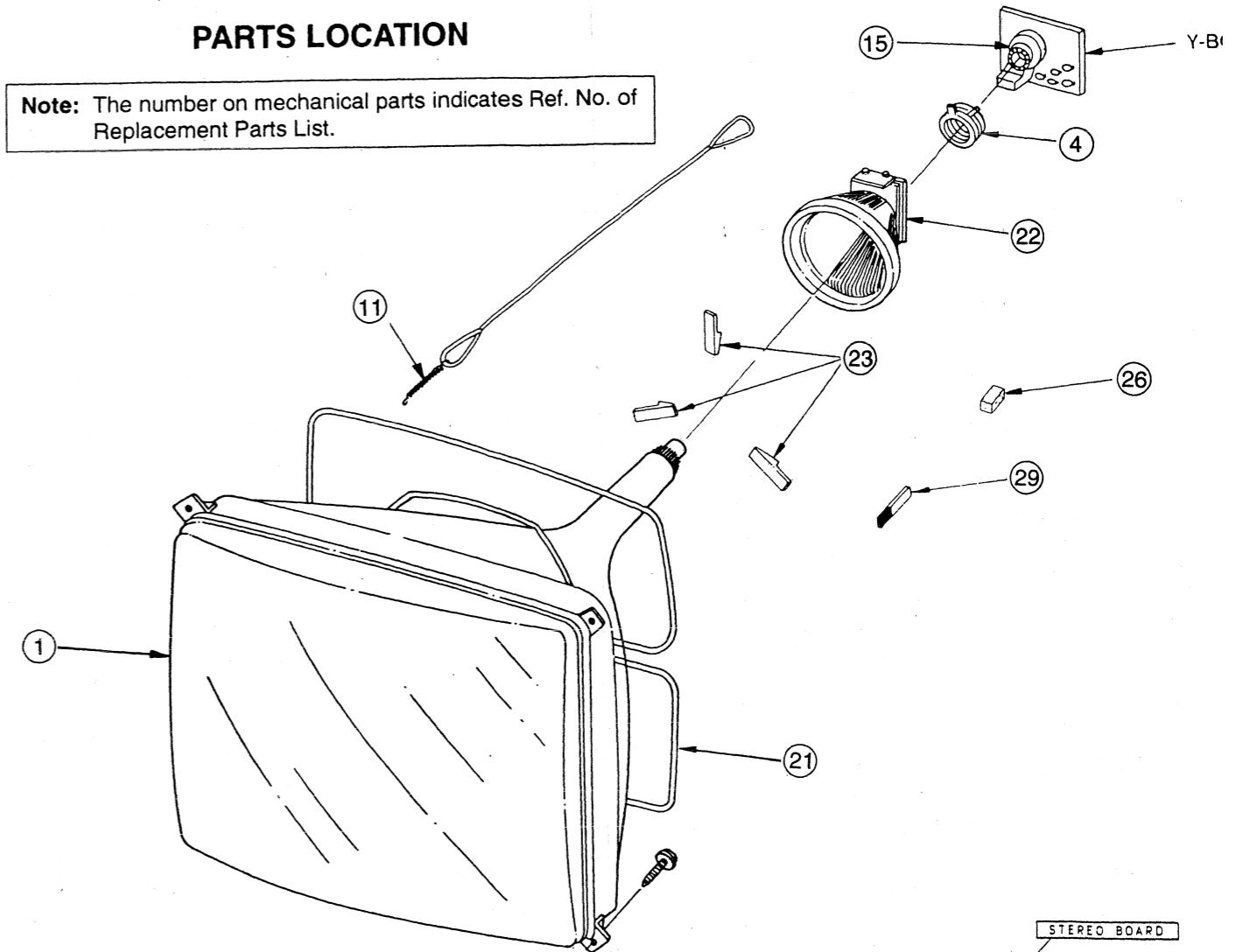
ITEM	MODEL
E-BOARD	KL-21GF10M
Y-BOARD	KL-21GF10Z
CRT	TNP4G027
	AN7712F

PARTS LOCATION

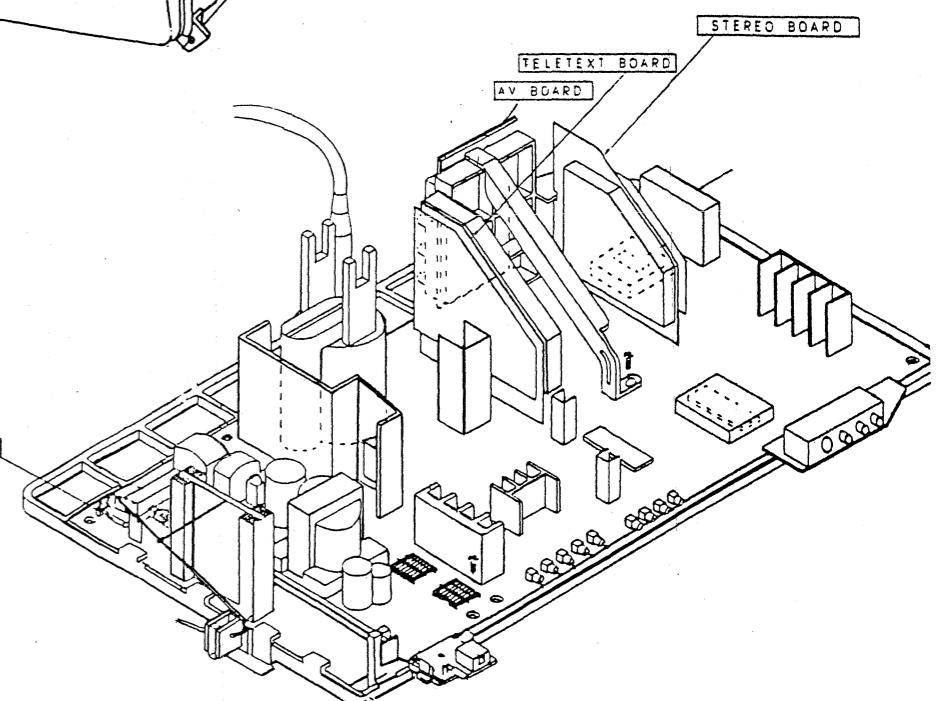
Note: The number on mechanical parts indicates Ref. No. of Replacement Parts List.



(FOR SINGAPORE)

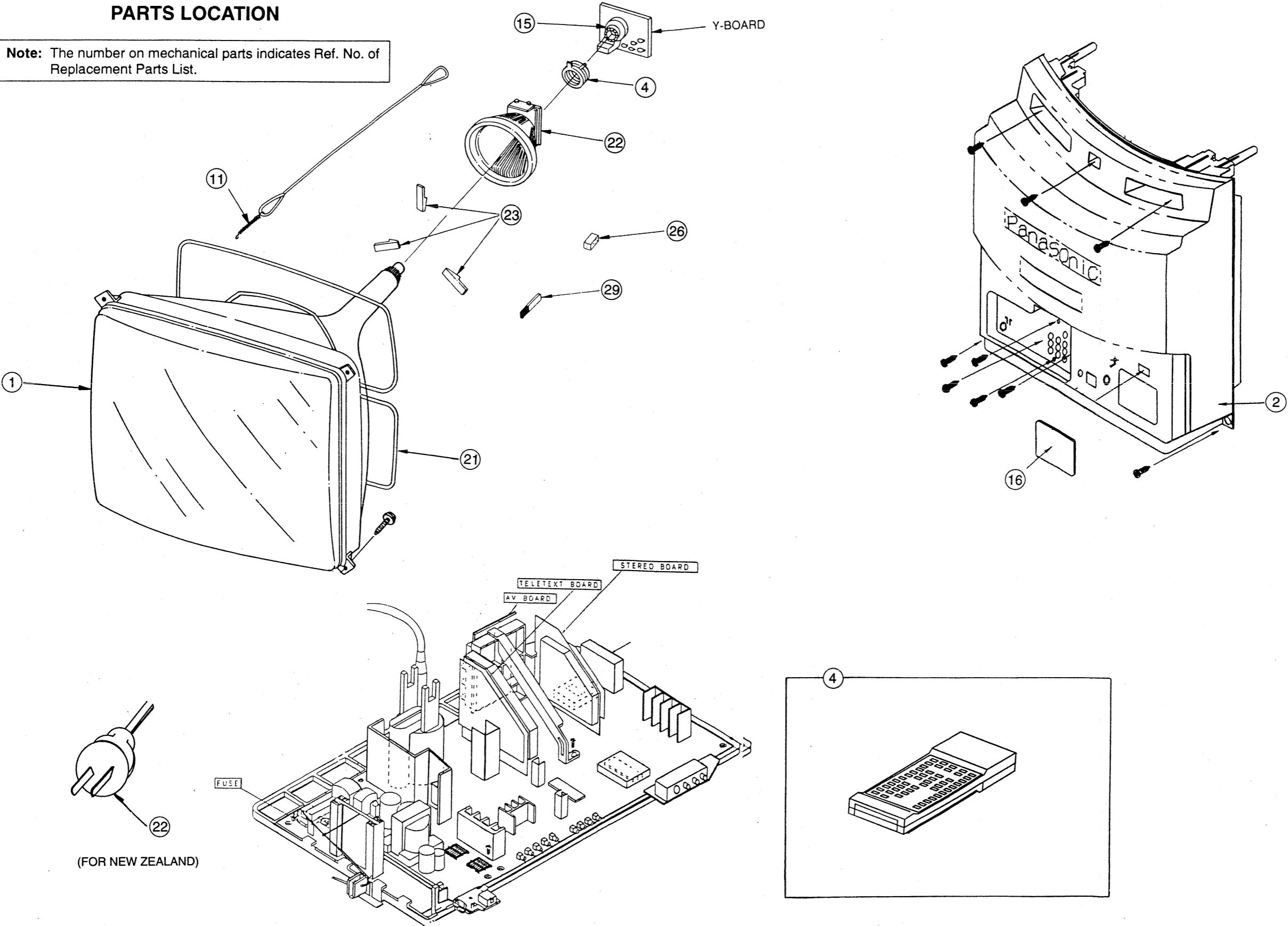


(FOR NEW ZEALAND)



PARTS LOCATION

Note: The number on mechanical parts indicates Ref. No. of Replacement Parts List.



Replacement Parts List

Important Safety Notice

Components identified by \triangle mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

Note : Printed circuit board assembly with mark "NLA" is no longer available after production discontinuation of the complete set.

Abbreviation of part name and description

1. Resistor

Example :

ERD25TJ104 C 100KOHM, J, 1/4W
Type Allowance

2. Capacitor

Example :

ECKF1H103ZF C 0.01UF, Z, 50V
Type Allowance

Type	Allowance
C : Carbon	F: $\pm 1\%$
F : Fuse	G: $\pm 2\%$
M : Metal Oxide	J : $\pm 5\%$
Metal Film	K: $\pm 10\%$
S : Solid	M: $\pm 20\%$
W : Wire Wound	

Type	Allowance
C : Ceramic	C: $\pm 0.25\text{pF}$
E : Electrolytic	D: $\pm 0.5\text{pF}$
P : Polyester	F: $\pm 1\text{pF}$
Polypropylene	G: $\pm 3\%$
T : Tantalum	J : $\pm 5\%$
	K: $\pm 10\%$
	L: $\pm 15\%$
	M: $\pm 20\%$
	P: + 100%, - 0%
	Z: + 80%, - 20%

TX-21GF10M/Z

Replacement Parts List

Ref.No.	Part No.	Description
MECHANICAL PARTS		
1	A51KES165X	PICTURE TUBE MTV△ (TX-21GF10M)
1	A51KES167X	PICTURE TUBE MTV△ (TX-21GF10Z)
2	EAB12129AG-1	SPEAKER BOX MTV
3	ENV59898F2	TUNER MTV△
4	EUR641513	REMOTE CTRL. TRAN. MTV△
5	TBM4G0075	MODEL NAME PLATE MTV△ (TX-21GF10M)
5	TBM4G0076	MODEL NAME PLATE MTV△ (TX-21GF10Z)
6	TBX4G80901	POWER BUTTON MTV
7	TEK6935	DOOR SWITCH
8	TES2273	SPRING
9	TES4223	SPRING
10	TES4537	SPRING
11	TES6583	SPRING FOR TR
12	TJB4G603	AV TERMINAL MTV
13	TJS1A5081	CRT SOCKET △
14	TKP4G10141	DOOR MTV
15	TKP4G90013	SP PUNCH. SHEET MTV
16	TKU4G1200-1	BACK COVER ASSY MTV
17	TLC2042-1	CONVERGENCE YOKE
18	TLK4G9005S	DEGAUSSING COIL MTV△
19	TLY4G401F	DEFLECTION YOKE MTV△
20	TMM27523	DY WEDGE
NLA	TNP4G011	T BOARD MTV△
NLA	TNP4G012AA	NC BOARD MTV△
NLA	TNP4G014	P BOARD MTV△
NLA	TNP4G015BA	E BOARD MTV△
NLA	TNP4G016	R BOARD MTV△
NLA	TNP4G021	RAV BOARD MTV△
NLA	TNP4G027	Y BOARD MTV△
	TPC4G40901	CARTON MTV (TX-21GF10M)
	TPC4G40902	CARTON MTV (TX-21GF10Z)
	TPD4G1008	CUSHION (TOP) MTV
	TPE4G14002	SET COVER MTV
	TPE4G14003	LAMI BAG MTV
	TQB4G1084	FAN BAG MTV (TX-21GF10M)

Ref.No.	Part No.	Description
	TQB4G1085	FAN BAG MTV (TX-21GF10Z)
21	TSN63115-4	PURITY MAGNET MTV
22	TSX4G102H1	AC POWER CORD MTV△
22	TSX4G108H	AC POWER CORD MTV△ (TX-21GF10Z)
23	TXFKY01YK2S	CABINET ASSY MTV
24	TXFMK01H55	MAGNET
	TXFPD02YK2S	CUSHION (BOTTOM) MTV
RESISTORS		
R101	ERDS2TJ822	C 8.2KOHM, J, 1/4W
R102	ERDS2TJ102	C 1KOHM, J, 1/4W
R103	ERQ14AJ220P	F 220OHM, J, 1/4W △
R104	ERDS2TJ102	C 1KOHM, J, 1/4W
R105	ERDS2TJ182	C 1.8KOHM, J, 1/4W
R108	EVND4AA00B14	CONTROL 10KOHMB
R110	ERDS2TJ103	C 10KOHM, J, 1/4W
R111	ERDS2TJ153	C 15KOHM, J, 1/4W
R112	ERDS2TJ273	C 27KOHM, J, 1/4W
R113	EVND4AA00B14	CONTROL 10KOHMB
R114	ERDS2TJ681	C 680OHM, J, 1/4W
R115	ERDS2TJ560	C 560OHM, J, 1/4W
R116	ERDS2TJ152	C 1.5KOHM, J, 1/4W
R117	ERDS2TJ272	C 2.7KOHM, J, 1/4W
R118	ERDS2TJ683	C 68KOHM, J, 1/4W
R119	ERDS2TJ823	C 82KOHM, J, 1/4W
R120	ERDS2TJ103	C 10KOHM, J, 1/4W
R122	ERD25TJ102	C 1KOHM, J, 1/4W
R123	ERDS2TJ391	C 390OHM, J, 1/4W
R124	ERDS2TJ332	C 3.3KOHM, J, 1/4W
R126	ERDS2TJ391	C 390OHM, J, 1/4W
R127	ERDS2TJ331	C 330OHM, J, 1/4W
R128	ERDS2TJ121	C 120OHM, J, 1/4W
R129	ERDS2TJ121	C 120OHM, J, 1/4W
R130	ERDS2TJ560	C 560OHM, J, 1/4W
R131	ERDS2TJ333	C 33KOHM, J, 1/4W
R133	ERDS2TJ153	C 15KOHM, J, 1/4W
R135	ERDS2TJ560	C 560OHM, J, 1/4W
R140	ERDS2TJ123	C 12KOHM, J, 1/4W
R141	ERDS2TJ332	C 3.3KOHM, J, 1/4W
R142	ERDS2TJ103	C 10KOHM, J, 1/4W
R143	ERDS2TJ123	C 12KOHM, J, 1/4W

TX-21GF10M/Z

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
R144	EVND4AA00B34	CONTROL 30KOHMB	R319	ERDS2TJ273	C 27KOHM, J, 1/4W
R145	ERDS2TJ472	C 4.7KOHM, J, 1/4W	R325	EVND4AA00B33	CONTROL 3KOHMB
R146	ERDS2TJ394	C 390KOHM, J, 1/4W	R326	ERDS2TJ272	C 2.7KOHM, J, 1/4W
R147	ERDS2TJ102	C 1KOHM, J, 1/4W	R351	ERG2ANJ822	M 8.2KOHM, J, 2W
R149	ERDS2TJ103	C 10KOHM, J, 1/4W	R352	ERG2ANJ822	M 8.2KOHM, J, 2W
R150	ERDS2TJ273	C 27KOHM, J, 1/4W	R353	ERG2ANJ822	M 8.2KOHM, J, 2W
R151	ERDS2TJ331	C 330OHM, J, 1/4W	R354	ERDS1TJ272	C 2.7KOHM, J, 1/2W
R152	ERDS2TJ331	C 330OHM, J, 1/4W	R355	ERDS1TJ272	C 2.7KOHM, J, 1/2W
R153	ERDS2TJ221	C 220OHM, J, 1/4W	R356	ERDS1TJ272	C 2.7KOHM, J, 1/2W
R154	ERDS2TJ331	C 330OHM, J, 1/4W	R366	ERDS2TJ221	C 220OHM, J, 1/4W
R157	ERDS2TJ272	C 2.7KOHM, J, 1/4W	R367	ERDS2TJ221	C 220OHM, J, 1/4W
R158	ERDS2TJ100	C 100OHM, J, 1/4W	R368	ERDS2TJ221	C 220OHM, J, 1/4W
R159	ERD25TJ100	C 100OHM, J, 1/4W	R369	ERDS2TJ562	C 5.6KOHM, J, 1/4W
R160	ERDS2TJ102	C 1KOHM, J, 1/4W	R370	ERDS2TJ562	C 5.6KOHM, J, 1/4W
R161	ERDS2TJ151	C 150OHM, J, 1/4W	R371	ERDS2TJ562	C 5.6KOHM, J, 1/4W
R162	ERDS2TJ203	C 20KOHM, J, 1/4W	R372	ERDS2TJ101	C 100OHM, J, 1/4W
R163	ERDS2TJ103	C 10KOHM, J, 1/4W	R373	ERDS2TJ101	C 100OHM, J, 1/4W
R164	ERDS2TJ103	C 10KOHM, J, 1/4W	R374	ERDS2TJ101	C 100OHM, J, 1/4W
R165	ERDS2TJ103	C 10KOHM, J, 1/4W	R401	ERD25TJ332	C 3.3KOHM, J, 1/4W
R166	ERDS2TJ123	C 12KOHM, J, 1/4W	R411	ERD2FAVJ1R2W	C 1.2OHM, J, 1/4W
R168	ERDS2TJ154	C 150KOHM, J, 1/4W	R412	ERDS2TJ101	C 100OHM, J, 1/4W
R169	ERDS2TJ393	C 39KOHM, J, 1/4W	R413	ERD25TJ271	C 270OHM, J, 1/4W
R170	ERDS2TJ182	C 1.8KOHM, J, 1/4W	R421	ERDS2TJ912	C 9.1KOHM, J, 1/4W
R171	ERDS2TJ182	C 1.8KOHM, J, 1/4W	R432	ERDS2TJ474	C 470KOHM, J, 1/4W
R172	ERDS2TJ562	C 5.6KOHM, J, 1/4W	R434	ERDS2TJ102	C 1KOHM, J, 1/4W
R173	ERDS2TJ471	C 470OHM, J, 1/4W	R435	ERDS2TJ102	C 1KOHM, J, 1/4W
R177	ERDS2TJ100	C 100HM, J, 1/4W	R436	ERDS2TJ102	C 1KOHM, J, 1/4W
R184	ERDS2TJ471	C 470OHM, J, 1/4W	R437	ERD25TJ101	C 100OHM, J, 1/4W
R197	ERDS2TJ222	C 2.2KOHM, J, 1/4W	R438	ERDS2TJ471	C 470OHM, J, 1/4W
R201	ERDS2TJ471	C 470OHM, J, 1/4W	R439	ERDS2TJ471	C 470OHM, J, 1/4W
R202	ERDS2TJ102	C 1KOHM, J, 1/4W	R443	ERDS2TJ273	C 27KOHM, J, 1/4W
R203	ERDS2TJ471	C 470OHM, J, 1/4W	R452	ERDS2TJ103	C 10KOHM, J, 1/4W
R245	ERDS2TJ471	C 470OHM, J, 1/4W	R465	ERDS2TJ823	C 82KOHM, J, 1/4W
R246	ERDS2TJ471	C 470OHM, J, 1/4W	R470	ERDS2TJ153	C 15KOHM, J, 1/4W
R247	ERDS2TJ471	C 470OHM, J, 1/4W	R471	ERDS1TJ152	C 1.5KOHM, J, 1/2W
R248	ERD25TJ471	C 470OHM, J, 1/4W	R472	ERD25TJ102	C 1KOHM, J, 1/4W
R260	ERDS2TJ561	C 560OHM, J, 1/4W	R473	ERG1SJ221P	M 220OHM, J, 1W
R301	ERDS2TJ102	C 1KOHM, J, 1/4W	R474	ERDS2TJ473	C 47KOHM, J, 1/4W
R303	ERDS2TJ152	C 1.5KOHM, J, 1/4W	R475	ERX1SJ1R5P	M 1.5OHM, J, 1W
R305	ERDS2TJ563	C 56KOHM, J, 1/4W	R476	ERDS2TJ104	C 100KOHM, J, 1/4W
R306	ERDS2TJ184	C 180KOHM, J, 1/4W	R477	ERDS2TJ123	C 12KOHM, J, 1/4W
R317	ERDS2TJ183	C 18KOHM, J, 1/4W	R478	ERDS1VJ912T	C 9.1KOHM, J, 1/2W MTV
R318	ERDS2TJ104	C 100KOHM, J, 1/4W	R479	ERDS2TJ272	C 2.7KOHM, J, 1/4W

TX-21GF10M/Z

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
R502	ERQ14AJ2R0P	F 2.0OHM, J, 1/4W △	R613	ERDS2TJ471	C 4700HM, J, 1/4W
R504	ERDS2TJ824	C 820KOHM, J, 1/4W	R614	EVND4AA00B52	CONTROL 500OHMB
R505	ERDS2TJ333	C 33KOHM, J, 1/4W	R615	ERDS2TJ391	C 390OHM, J, 1/4W
R506	ERDS2TJ105	C 1MOHM, J, 1/4W	R616	ERDS2TJ471	C 470OHM, J, 1/4W
R507	ERDS2TJ151	C 150OHM, J, 1/4W	R618	ERDS2TJ331	C 330OHM, J, 1/4W
R508	ERDS2TJ224	C 220KOHM, J, 1/4W	R619	ERDS2TJ331	C 330OHM, J, 1/4W
R510	ERDS2TJ101	C 100OHM, J, 1/4W	R620	ERDS2TJ331	C 330OHM, J, 1/4W
R511	ERDS2TJ475	C 4.7MOHM, J, 1/4W	R621	ERDS2TJ102	C 1KOHM, J, 1/4W
R512	ERDS2TJ103	C 10KOHM, J, 1/4W	R622	ERDS2TJ102	C 1KOHM, J, 1/4W
R513	ERDS2TJ103	C 10KOHM, J, 1/4W	R623	ERDS2TJ102	C 1KOHM, J, 1/4W
R514	ERD25TJ561	C 560OHM, J, 1/4W	R624	ERDS2TJ244	C 240KOHM, J, 1/4W
R515	ERDS2TJ561	C 560OHM, J, 1/4W	R625	ERDS2TJ102	C 1KOHM, J, 1/4W
R517	ERQ12HJ1R0	F 1OHM, J, 1/2W	R626	ERDS2TJ102	C 1KOHM, J, 1/4W
R520	ERDS2TJ183	C 18KOHM, J, 1/4W	R627	ERDS2TJ102	C 1KOHM, J, 1/4W
R522	ERD25TJ223	C 22KOHM, J, 1/4W	R629	ERDS2TJ105	C 1MOHM, J, 1/4W
R523	ERQ1CJP6R8S	F 6.8OHM, J, 1W △	R630	ERDS2TJ332	C 3.3KOHM, J, 1/4W
R524	ERQ1CJ102	F 1KOHM, J, 1W △	R632	ERDS2TJ332	C 3.3KOHM, J, 1/4W
R525	ER050CKF1153	M 115KOHM, F, 1/2W MTV	R633	ERDS2TJ332	C 3.3KOHM, J, 1/4W
R526	ERG2ANJ822	M 8.2KOHM, J, 2W	R641	ERD25TJ563	C 56KOHM, J, 1/4W
R527	ERDS2TJ821	C 820OHM, J, 1/4W	R646	ERD25TJ330	C 33KOHM, J, 1/4W
R529	ERDS2TJ334	C 330KOHM, J, 1/4W	R648	ERDS2TJ820	C 82OHM, J, 1/4W
R531	ERDS2TJ223	C 22KOHM, J, 1/4W	R649	ERDS2TJ125	C 1.2MOHM, J, 1/4W
R532	ERDS2TJ104	C 100KOHM, J, 1/4W	R655	ERDS2TJ102	C 1KOHM, J, 1/4W
R533	ERDS2TJ103	C 10KOHM, J, 1/4W	R671	ERDS2TJ102	C 1KOHM, J, 1/4W
R534	ERQ12AJ101	F 100OHM, J, 1/2W △	R674	ERDS2TJ152	C 1.5KOHM, J, 1/4W
R538	ERDS2TJ684	C 680KOHM, J, 1/4W	R675	ERDS2TJ221	C 220OHM, J, 1/4W
R539	ERDS2TJ824	C 820KOHM, J, 1/4W	R676	ERDS2TJ561	C 560OHM, J, 1/4W
R540	ERQ14AJ100P	F 10OHM, J, 1/4W △	R717	ERD25TJ472	C 4.7KOHM, J, 1/4W
R541	ER052CKF7321	M7.32KOHM, F, 1/4W MTV	R718	ERDS2TJ152	C 1.5KOHM, J, 1/4W
R542	ER052CKF5111	M5.11KOHM, F, 1/4W	R725	ERDS2TJ562	C 5.6KOHM, J, 1/4W
R544	ERDS2TJ682	C 6.8KOHM, J, 1/4W	R729	ERQ2CJ100	F 10OHM, J, 2W △
R545	ERDS2TJ332	C 3.3KOHM, J, 1/4W	R731	ERDS2TJ104	C 100KOHM, J, 1/4W
R546	ERF15ZK4R7	W 4.7OHM, 15W	R732	ERDS2TJ104	C 100KOHM, J, 1/4W
R550	ERG2ANJ123	M 12KOHM, J, 2W	R733	ERDS2TJ472	C 4.7KOHM, J, 1/4W
R551	ERG3ANJ272	M 2.7KOHM, J, 3W	R734	ERDS2TJ102	C 1KOHM, J, 1/4W
R552	ERDS2TJ564	C 560KOHM, J, 1/4W	R803	ERG2ANJ563	M 56KOHM, J, 2W MTV
R553	ERDS2TJ824	C 820KOHM, J, 1/4W	R804	ERG1ANJ203	M 20KOHM, J, 1W
R557	ERDS1TJ105	C 1MOHM, J, 1/2W	R805	ERG2ANJ473H	M 47KOHM, J, 2W
R561	ERDS2TJ683	C 68KOHM, J, 1/4W	R806	ERG1ANJ103H	M 10KOHM, J, 1W
R608	ERD25TJ101	C 1000OHM, J, 1/4W	R807	ERG1ANJ150H	M 15OHM, J, 1W
R609	ERDS2TJ222	C 2.2KOHM, J, 1/4W	R809	ERF15ZK4R7	W 4.7OHM, 15W
R610	ERDS2TJ152	C 1.5KOHM, J, 1/4W	R810	ERW2PKR22C	W 0.22OHM, K, 2W MTV
R612	ERDS2TJ472	C 4.7KOHM, J, 1/4W	R812	ERDS2TJ331	C 330OHM, J, 1/4W

TX-21GF10M/Z

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
R813	ERDS2TJ362	C 3.6KOHM, J,1/4W	R1134	ERDS2TJ123	C 12KOHM, J,1/4W
R814	ERDS2TJ101	C 1000OHM, J,1/4W	R1135	ERDS2TJ101	C 1000OHM, J,1/4W
R815	ERDS1TJ682	C 6.8KOHM, J,1/2W	R1136	ERDS2TJ103	C 10KOHM, J,1/4W
R816	ERQ12HKR82	F 0.82OHM, K,1/2W ▲	R1138	ERDS2TJ105	C 1MOHM, J,1/4W
R817	ERQ2CKR33	F 0.33OHM, K, 2W MTV▲	R1139	ERDS2TJ392	C 3.9KOHM, J,1/4W
R819	ERDS2TJ102	C 1KOHM, J,1/4W	R1140	ERDS2TJ101	C 100OHM, J,1/4W
R821	ERD75TAJ825	C 8.2MOHM, J,3/4W	R1141	ERD25TJ101	C 100OHM, J,1/4W
R822	ERQ2CKR33	F 0.33OHM, K, 2W MTV▲	R1142	ERDS2TJ101	C 100OHM, J,1/4W
R824	ERDS2TJ473	C 47KOHM, J,1/4W	R1143	ERD25TJ101	C 100OHM, J,1/4W
R825	ERDS2TJ332	C 3.3KOHM, J,1/4W	R1144	ERDS2TJ123	C 12KOHM, J,1/4W
R826	ERDS2TJ561	C 5600HM, J,1/4W	R1145	ERDS2TJ273	C 27KOHM, J,1/4W
R828	ERG1ANJ103H	M 10KOHM, J, 1W	R1146	ERDS2TJ222	C 2.2KOHM, J,1/4W
R829	ERG1ANJ822H	M 8.2KOHM, J, 1W	R1147	ERD25TJ101	C 100OHM, J,1/4W
R830	ERDS2TJ473	C 47KOHM, J,1/4W	R1148	ERDS2TJ123	C 12KOHM, J,1/4W
R831	ERDS2TJ272	C 2.7KOHM, J,1/4W	R1149	ERDS2TJ563	C 56KOHM, J,1/4W
R833	ERQ12AJ220P	F 220HM, J,1/2W ▲	R1150	ERD25TJ123	C 12KOHM, J,1/4W
R834	ERDS1TJ470	C 47OHM, J,1/2W	R1151	ERDS2TJ472	C 4.7KOHM, J,1/4W
R837	ERDS2TJ332	C 3.3KOHM, J,1/4W	R1152	ERD25TJ101	C 100OHM, J,1/4W
R1102	ERDS2TJ223	C 22KOHM, J,1/4W	R1153	ERDS2TJ222	C 2.2KOHM, J,1/4W
R1103	ERDS2TJ101	C 1000OHM, J,1/4W	R1154	ERDS2TJ273	C 27KOHM, J,1/4W
R1104	ERDS2TJ101	C 1000OHM, J,1/4W	R1155	ERDS2TJ222	C 2.2KOHM, J,1/4W
R1105	ERDS2TJ472	C 4.7KOHM, J,1/4W	R1156	ERD25TJ123	C 12KOHM, J,1/4W
R1106	ER0S2CKF1002	M 10KOHM, F,1/4W	R1157	ERDS2TJ183	C 18KOHM, J,1/4W
R1107	ER0S2CKF1002	M 10KOHM, F,1/4W	R1158	ERDS2TJ822	C 8.2KOHM, J,1/4W
R1108	ERD25TJ152	C 1.5KOHM, J,1/4W	R1159	ERDS2TJ101	C 100OHM, J,1/4W
R1109	ERDS2TJ562	C 5.6KOHM, J,1/4W	R1160	ERDS2TJ101	C 100OHM, J,1/4W
R1110	ERD25TJ152	C 1.5KOHM, J,1/4W	R1161	ERDS2TJ153	C 15KOHM, J,1/4W
R1111	ERDS2TJ471	C 4700HM, J,1/4W	R1162	ERDS2TJ272	C 2.7KOHM, J,1/4W
R1113	ERDS2TJ122	C 1.2KOHM, J,1/4W	R1163	ERDS2TJ123	C 12KOHM, J,1/4W
R1115	ERDS2TJ222	C 2.2KOHM, J,1/4W	R1164	ERDS2TJ102	C 1KOHM, J,1/4W
R1119	ERDS2TJ101	C 1000OHM, J,1/4W	R1165	ERDS2TJ101	C 100OHM, J,1/4W
R1120	ERDS2TJ104	C 100KOHM, J,1/4W	R1170	ERDS2TJ272	C 2.7KOHM, J,1/4W
R1121	ERDS2TJ332	C 3.3KOHM, J,1/4W	R1172	ERDS2TJ123	C 12KOHM, J,1/4W
R1122	ERDS2TJ332	C 3.3KOHM, J,1/4W	R1175	ERDS2TJ101	C 100OHM, J,1/4W
R1124	ERDS2TJ102	C 1KOHM, J,1/4W	R1176	ERDS2TJ103	C 10KOHM, J,1/4W
R1125	ERDS2TJ102	C 1KOHM, J,1/4W	R1184	ERDS2TJ222	C 2.2KOHM, J,1/4W
R1126	ERDS2TJ101	C 1000OHM, J,1/4W	R1185	ERDS2TJ222	C 2.2KOHM, J,1/4W
R1127	ERDS2TJ560	C 560HM, J,1/4W	R1186	ERDS2TJ332	C 3.3KOHM, J,1/4W
R1128	ERDS2TJ560	C 560HM, J,1/4W	R1187	ERDS2TJ512	C 5.1KOHM, J,1/4W
R1129	ERDS2TJ103	C 10KOHM, J,1/4W	R1188	ERD25TJ912	C 9.1KOHM, J,1/4W
R1130	ERD25TJ332	C 3.3KOHM, J,1/4W	R1189	ER0S2CKF2102	M 21KOHM, F,1/4W
R1131	ERDS2TJ392	C 3.9KOHM, J,1/4W	R1190	ERDS2TJ222	C 2.2KOHM, J,1/4W
R1133	ERDS2TJ123	C 12KOHM, J,1/4W	R1191	ERDS2TJ222	C 2.2KOHM, J,1/4W

TX-21GF10M/Z

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
R1192	ERDS2TJ332	C 3.3KOHM, J, 1/4W	R2054	ERJ6GEYJ104	M 100KOHM, J, 1/1CW
R1193	ERDS2TJ512	C 5.1KOHM, J, 1/4W	R2055	ERJ6GEYJ273	M 27KOHM, J, 1/10W
R1194	ERD25TJ912	C 9.1KOHM, J, 1/4W	R2056	ERJ6GEYJ104	M 100KOHM, J, 1/10W
R1199	ERD25TJ103	C 10KOHM, J, 1/4W	R2057	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R1201	EROS2CKF1373	M 137KOHM, F, 1/4W MTV	R2058	ERJ6GEYJ223	M 22KOHM, J, 1/10W
R1202	ERDS2TJ4R7	C 4.7OHM, J, 1/4W	R2060	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R1203	ERDS2TJ562	C 5.6KOHM, J, 1/4W	R2061	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R1204	ERDS2TJ470	C 47OHM, J, 1/4W	R2062	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R1210	ERDS2TJ182	C 1.8KOHM, J, 1/4W	R2063	ERJ6GEYJ681	M 680OHM, J, 1/10W
R1211	ERDS2TJ222	C 2.2KOHM, J, 1/4W	R2064	ERJ6GEYJ222	M 2.2KOHM, J, 1/10W
R1212	ERDS2TJ182	C 1.8KOHM, J, 1/4W	R2065	ERJ6GEYJ681	M 680OHM, J, 1/10W
R2004	ERJ6GEYJ392	M 3.9KOHM, J, 1/10W	R2070	ERJ6GEYJ563	M 56KOHM, J, 1/10W MTV
R2005	ERJ6GEYJ392	M 3.9KOHM, J, 1/10W	R2071	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R2006	ERJ6GEYJ102	M 1KOHM, J, 1/10W	R2072	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R2007	ERJ6GEYJ101	M 1000OHM, J, 1/10W	R2073	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R2009	ERJ6GEYJ560	M 56OHM, J, 1/10W	R2074	ERJ6GEYJ562	M 5.6KOHM, J, 1/10W
R2010	ERJ6GEYJ431	M 430OHM, J, 1/10W	R2075	ERJ6GEY0R00	M 0OHM, J, 1/10W
R2011	ERJ6GEYJ241	M 240OHM, J, 1/10W	R2076	ERJ6GEYJ394	M 390KOHM, J, 1/10W
R2012	ERJ6GEYJ332	M 3.3KOHM, J, 1/10W	R2077	ERJ6GEYJ563	M 56KOHM, J, 1/10W MTV
R2013	ERJ6GEYJ332	M 3.3KOHM, J, 1/10W	R2078	ERJ6GEYJ394	M 390KOHM, J, 1/10W
R2014	ERJ6GEYJ823	M 82KOHM, J, 1/10W	R2079	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R2016	ERJ6GEYJ101	M 1000OHM, J, 1/10W	R2080	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R2019	ERJ6GEYJ104	M 100KOHM, J, 1/10W	R2081	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R2020	ERJ6GEYJ150	M 150OHM, J, 1/10W	R2082	ERJ6GEYJ562	M 5.6KOHM, J, 1/10W
R2021	ERJ6GEYJ223	M 22KOHM, J, 1/10W	R2085	ERJ6GEYJ101	M 100OHM, J, 1/10W
R2022	ERJ6GEYJ223	M 22KOHM, J, 1/10W	R2086	ERJ6GEYJ101	M 100OHM, J, 1/10W
R2023	ERJ6GEYJ392	M 3.9KOHM, J, 1/10W	R2204	ERDS2TJ101	C 100OHM, J, 1/4W
R2025	ERJ6GEYJ224	M 220KOHM, J, 1/10W	R2205	ERDS2TJ101	C 100OHM, J, 1/4W
R2030	ERJ6GEY0R00	M 0OHM, J, 1/10W	R2206	ERDS2TJ472	C 4.7KOHM, J, 1/4W
R2035	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W	R2207	EVND4AA00B14	CONTROL 10KOHMB
R2036	ERJ6GEYJ562	M 5.6KOHM, J, 1/10W	R2208	ERDS2TJ103	C 10KOHM, J, 1/4W
R2037	ERJ6GEYJ562	M 5.6KOHM, J, 1/10W	R2209	ERDS2TJ223	C 22KOHM, J, 1/4W
R2038	ERJ6GEYJ562	M 5.6KOHM, J, 1/10W	R2210	ERQ14AJ100P	F 100OHM, J, 1/4W
R2039	ERJ6GEYJ182	M 1.8KOHM, J, 1/10W	R2213	ERDS2TJ471	C 470OHM, J, 1/4W
R2040	ERJ6GEYJ562	M 5.6KOHM, J, 1/10W	R2214	ERDS2TJ471	C 470OHM, J, 1/4W
R2041	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W	R2301	ERDS2TJ101	C 100OHM, J, 1/4W
R2042	ERJ6GEYJ473	M 47KOHM, J, 1/10W	R2302	ERDS2TJ101	C 100OHM, J, 1/4W
R2045	ERJ6GEYJ473	M 47KOHM, J, 1/10W	R2303	ERDS2TJ101	C 100OHM, J, 1/4W
R2049	ERJ6GEY0R00	M 0OHM, J, 1/10W	R2304	ERDS2TJ101	C 100OHM, J, 1/4W
R2050	ERJ6GEYJ471	M 470OHM, J, 1/10W	R2305	ERDS2TJ824	C 820KOHM, J, 1/4W
R2051	ERJ6GEYJ471	M 470OHM, J, 1/10W	R2306	ERDS2TJ332	C 3.3KOHM, J, 1/4W
R2052	ERJ6GEYJ105	M 1MOHM, J, 1/10W	R2307	ERDS2TJ102	C 1KOHM, J, 1/4W
R2053	ERJ6GEYJ102	M 1KOHM, J, 1/10W	R2308	ERDS2TJ104	C 100KOHM, J, 1/4W

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
R2309	ERDS2TJ123	C 12KOHM, J,1/4W	R3013	ERDS2TJ184	C 180KOHM, J,1/4W
R2310	ERDS2TJ102	C 1KOHM, J,1/4W	R3014	ERDS2TJ102	C 1KOHM, J,1/4W
R2311	ERDS1TJ2R2	C 2.2OHM, J,1/2W	R3015	ERDS2TJ184	C 180KOHM, J,1/4W
R2312	ERDS1TJ2R2	C 2.2OHM, J,1/2W	R3020	ERDS2TJ102	C 1KOHM, J,1/4W
R2313	ERDS2TJ822	C 8.2KOHM, J,1/4W	R3025	ERDS2TJ101	C 100OHM, J,1/4W
R2314	ERDS2TJ392	C 3.9KOHM, J,1/4W	R3026	ERDS2TJ102	C 1KOHM, J,1/4W
R2315	ERDS2TJ392	C 3.9KOHM, J,1/4W	R3028	ERDS2TJ472	C 4.7KOHM, J,1/4W
R2316	ERDS2TJ102	C 1KOHM, J,1/4W	R3029	ERDS2TJ223	C 22KOHM, J,1/4W
R2317	ERDS2TJ102	C 1KOHM, J,1/4W	R3030	ERDS2TJ223	C 22KOHM, J,1/4W
R2318	ERDS2TJ101	C 1000OHM, J,1/4W	R3031	ERDS2TJ101	C 1000OHM, J,1/4W
R2319	ERDS2TJ101	C 1000OHM, J,1/4W	R3034	ERD25TJ101	C 1000OHM, J,1/4W
R2320	ERDS2TJ101	C 1000OHM, J,1/4W	R3038	ERD25TJ223	C 22KOHM, J,1/4W
R2321	ERDS2TJ392	C 3.9KOHM, J,1/4W	R3039	ERDS2TJ223	C 22KOHM, J,1/4W
R2322	ERDS2TJ392	C 3.9KOHM, J,1/4W	R3044	ERDS2TJ273	C 27KOHM, J,1/4W
R2323	ERDS2TJ102	C 1KOHM, J,1/4W	R3046	ERDS2TJ103	C 10KOHM, J,1/4W
R2326	ERD25TJ101	C 1000OHM, J,1/4W	R3049	ERDS2TJ103	C 10KOHM, J,1/4W
R2327	ERDS2TJ101	C 1000OHM, J,1/4W	R3051	ERDS2TJ102	C 1KOHM, J,1/4W
R2331	ERDS2TJ104	C 100KOHM, J,1/4W	R3052	ERDS2TJ102	C 1KOHM, J,1/4W
R2332	ERDS2TJ472	C 4.7KOHM, J,1/4W	R3053	ERDS2TJ102	C 1KOHM, J,1/4W
R2333	ERQ2CJ1R0	F 1OHM, J, 2W MTV△	R3054	ERDS2TJ391	C 3900OHM, J,1/4W
R2334	ERDS2TJ122	C 1.2KOHM, J,1/4W	R3055	ERDS2TJ103	C 10KOHM, J,1/4W
R2335	ERDS2TJ122	C 1.2KOHM, J,1/4W	R3056	ERDS2TJ104	C 100KOHM, J,1/4W
R2349	ERDS2TJ821	C 8200OHM, J,1/4W	R3057	ERDS2TJ101	C 1000OHM, J,1/4W
R2350	ERDS2TJ821	C 8200OHM, J,1/4W	R3060	ERDS2TJ104	C 100KOHM, J,1/4W
R2351	ERDS2TJ104	C 100KOHM, J,1/4W	R3061	ERDS2TJ223	C 22KOHM, J,1/4W
R2352	ERDS2TJ104	C 100KOHM, J,1/4W	R3063	ERDS2TJ104	C 100KOHM, J,1/4W
R2353	ERDS2TJ473	C 47KOHM, J,1/4W	R3064	ERDS2TJ101	C 1000OHM, J,1/4W
R2354	ERDS2TJ473	C 47KOHM, J,1/4W	R3065	ERDS2TJ102	C 1KOHM, J,1/4W
R2389	ERDS2TJ103	C 10KOHM, J,1/4W	R3066	ERDS2TJ272	C 2.7KOHM, J,1/4W
R2390	ERDS2TJ103	C 10KOHM, J,1/4W	R3067	ERDS2TJ101	C 1000OHM, J,1/4W
R2819	ERDS2TJ331	C 3300OHM, J,1/4W	R3068	ERDS2TJ102	C 1KOHM, J,1/4W
R2820	ERDS2TJ331	C 3300OHM, J,1/4W	R3069	ERD25FJ100	C 100OHM, J,1/4W
R3001	ERDS2TJ102	C 1KOHM, J,1/4W	R3070	ERDS2TJ221	C 2200OHM, J,1/4W
R3002	ERDS2TJ184	C 180KOHM, J,1/4W	R3071	ERDS2TJ680	C 68OHM, J,1/4W
R3003	ERDS2TJ102	C 1KOHM, J,1/4W	R3072	ERDS2TJ181	C 1800OHM, J,1/4W
R3004	ERDS2TJ184	C 180KOHM, J,1/4W	R3073	ERDS2TJ102	C 1KOHM, J,1/4W
R3005	ERDS2TJ750	C 750OHM, J,1/4W	R3074	ERDS2TJ331	C 3300OHM, J,1/4W
R3006	ERDS2TJ750	C 750OHM, J,1/4W	R3075	ERDS2TJ102	C 1KOHM, J,1/4W
R3007	ERDS2TJ331	C 3300OHM, J,1/4W	R3076	ERDS2TJ103	C 10KOHM, J,1/4W
R3008	ERDS2TJ243	C 24KOHM, J,1/4W	R3077	ERDS2TJ182	C 1.8KOHM, J,1/4W
R3009	ERDS2TJ273	C 27KOHM, J,1/4W	R3078	ERDS2TJ472	C 4.7KOHM, J,1/4W
R3010	ERDS2TJ750	C 750OHM, J,1/4W	R3079	ERDS2TJ271	C 2700OHM, J,1/4W
R3012	ERDS2TJ102	C 1KOHM, J,1/4W	R3080	ERDS2TJ152	C 1.5KOHM, J,1/4W

TX-21GF10M/Z

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
R3081	ERDS2TJ101	C 100OHM, J, 1/4W	R3545	ERJ6GEYJ101	M 100OHM, J, 1/10W
R3083	ERDS2TJ103	C 10KOHM, J, 1/4W	R3546	ERJ6GEYJ101	M 100OHM, J, 1/10W
R3084	ERDS2TJ103	C 10KOHM, J, 1/4W	R3552	ERJ6GEYJ101	M 100OHM, J, 1/10W
R3085	ERDS2TJ103	C 10KOHM, J, 1/4W	R3553	ERJ6GEYJ105	M 1MOHM, J, 1/10W
R3086	ERDS2TJ102	C 1KOHM, J, 1/4W	R3555	ERJ6GEYJ101	M 100OHM, J, 1/10W
R3087	ERDS2TJ102	C 1KOHM, J, 1/4W	R3557	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R3089	ERDS2TJ331	C 330OHM, J, 1/4W	R3558	ERJ6GEYJ101	M 100OHM, J, 1/10W
R3090	ERDS2TJ102	C 1KOHM, J, 1/4W	R3559	ERJ8GCYJ102	M 1KOHM, J, 1/8W
R3091	ERDS2TJ103	C 10KOHM, J, 1/4W	R3560	ERJ6GEYJ561	M 560OHM, J, 1/10W
R3501	ERJ8GCYJ221	M 220OHM, J, 1/8W	R3561	ERJ6GEYJ392	M 3.9KOHM, J, 1/10W
R3502	ERJ6GEYJ392	M 3.9KOHM, J, 1/10W	R3562	ERJ6GEYJ122	M 1.2KOHM, J, 1/10W
R3503	ERJ6GEYJ471	M 470OHM, J, 1/10W	R3563	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R3504	ERJ6GEYJ822	M 8.2KOHM, J, 1/10W	R3567	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W
R3505	ERJ8GCYJ102	M 1KOHM, J, 1/8W	R3568	ERJ6GEYJ822	M 8.2KOHM, J, 1/10W
R3506	ERJ6GEYJ103	M 10KOHM, J, 1/10W	R3569	ERJ6GEYJ153	M 15KOHM, J, 1/10W
R3507	ERJ8GCYJ102	M 1KOHM, J, 1/8W	R3570	ERJ6GEYJ223	M 22KOHM, J, 1/10W
R3508	ERJ6GEYJ103	M 10KOHM, J, 1/10W	R3571	ERJ6GEYJ101	M 100OHM, J, 1/10W
R3509	ERJ6GEYJ103	M 10KOHM, J, 1/10W	R3572	ERJ6GEYJ101	M 100OHM, J, 1/10W
R3510	ERJ8GCYJ102	M 1KOHM, J, 1/8W	R3573	ERJ8GCYJ331	M 330OHM, J, 1/8W
R3511	ERJ8GCYJ102	M 1KOHM, J, 1/8W	R3574	ERJ8GCYJ331	M 330OHM, J, 1/8W
R3512	ERJ6GEYJ103	M 10KOHM, J, 1/10W	R3575	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R3513	ERJ6GEYJ223	M 22KOHM, J, 1/10W	R3580	ERJ6GEYJ101	M 100OHM, J, 1/10W
R3514	EVNDDAA03B24	CONTROL 20KOHMB MTV	R3582	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R3515	ERJ6GEYJ392	M 3.9KOHM, J, 1/10W	R3584	ERJ6GEYJ473	M 47KOHM, J, 1/10W
R3516	ERJ6GEYJ153	M 15KOHM, J, 1/10W	R3585	ERJ6GEYJ473	M 47KOHM, J, 1/10W
R3519	ERJ6GEYJ103	M 10KOHM, J, 1/10W	R3586	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W
R3522	ERJ6GEYJ273	M 27KOHM, J, 1/10W	R3592	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W
R3525	ERJ6GEYJ332	M 3.3KOHM, J, 1/10W	R3593	ERJ6GEYJ222	M 2.2KOHM, J, 1/10W
R3528	ERJ8GCYJ561	M 560OHM, J, 1/8W	R3594	ERJ6GEYJ392	M 3.9KOHM, J, 1/10W
R3529	ERJ8GCYJ561	M 560OHM, J, 1/8W	R3595	ERJ6GEYJ222	M 2.2KOHM, J, 1/10W
R3530	ERQ14AJ100P	F 100OHM, J, 1/4W	R3596	ERJ6GEYJ222	M 2.2KOHM, J, 1/10W
R3532	ERJ6GEYJ823	M 82KOHM, J, 1/10W	R3597	ERJ6GEYJ103	M 10KOHM, J, 1/10W
R3533	ERJ6GEYJ182	M 1.8KOHM, J, 1/10W	R3598	ERJ6GEYJ562	M 5.6KOHM, J, 1/10W
R3534	ERJ6GEYJ750	M 750OHM, 1/10W	CAPACITORS		
R3535	ERJ6GEYJ750	M 750OHM, 1/10W	C101	ECKF1H103ZF	C 0.01UF, Z, 50V
R3536	ERJ6GEYJ750	M 750OHM, 1/10W	C102	ECEA1CU470	E 470UF, 16V
R3538	ERJ6GEYJ103	M 10KOHM, J, 1/10W	C103	ECQV1H334JZ	P 0.33UF, J, 50V
R3539	ERJ6GEYJ101	M 100OHM, J, 1/10W	C104	ECKF1H103ZF	C 0.01UF, Z, 50V
R3540	ERJ6GEYJ101	M 100OHM, J, 1/10W	C105	ECKF1H103ZF	C 0.01UF, Z, 50V
R3541	ERJ6GEYJ101	M 100OHM, J, 1/10W	C106	ECEA1CU471	E 470UF, 16V
R3542	ERJ6GEYJ101	M 100OHM, J, 1/10W	C107	ECKF1H103ZF	C 0.01UF, Z, 50V
R3543	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W	C109	ECKF1H103ZF	C 0.01UF, Z, 50V
R3544	ERJ6GEYJ101	M 100OHM, J, 1/10W	C110	ECKF1H103ZF	C 0.01UF, Z, 50V

TX-21GF10M/Z

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
C111	ECEA1CFS470	E 47UF, 16V	C203	ECCF1H151J	C 150PF, J, 50V
C112	ECEA1HFS3R3	E 3.3UF, 50V	C212	ECCF1H180JC	C 18PF, J, 50V
C113	ECEA1HFSR47	E 0.47UF, 50V	C240	ECCF1H121JP	C 120PF, J, 50V
C114	ECEA1HN010S	E 1UF, 50V	C250	ECCF1H560J	C 56PF, J, 50V
C115	ECKF1H103ZF	C 0.01UF, Z, 50V	C302	ECKF1H103ZF	C 0.01UF, Z, 50V
C116	ECEA1CU470	E 47UF, 16V	C303	ECEA1HUR33	E 0.33UF, 50V
C117	ECCF1H100DC	C 10PF, D, 50V	C304	ECEA1CN330S	E 33UF, 16V
C118	ECKF1H103ZF	C 0.01UF, Z, 50V	C305	ECEA1HU4R7	E 4.7UF, 50V
C120	ECEA1HFSR47	E 0.47UF, 50V	C319	ECEA1CN470S	E 47UF, 16V
C121	ECEA1CU470	E 47UF, 16V	C350	ECCF1H331J	C 330PF, J, 50V
C122	ECEA1HFSR47	E 0.47UF, 50V	C351	ECCF1H271J	C 270PF, J, 50V
C123	ECEA1CU330	E 33UF, 16V	C352	ECCF1H271J	C 270PF, J, 50V
C124	ECKF1H103ZF	C 0.01UF, Z, 50V	C353	ECCF1H271J	C 270PF, J, 50V
C125	ECCF1H180J	C 18PF, J, 50V	C354	ECKD3D821KBN	C 820PF, K, 2KV
C126	ECKF1H103ZF	C 0.01UF, Z, 50V	C356	ECKD2H103PU	C 0.01UF, P, 500V
C128	ECCF1H120JC	C 12PF, J, 50V	C410	ECQB1H153KF	P 0.015UF, K, 50V
C130	ECCF1H080DC	C 8PF, D, 50V	C411	ECKF1H103ZF	C 0.01UF, Z, 50V
C131	ECCF1H080DC	C 8PF, D, 50V	C438	ECEA1CGE471	E 470UF, 16V
C132	ECCF1H270JC	C 27PF, J, 50V	C439	ECQB1H183JF	P 0.018UF, J, 50V MTV
C133	ECCF1H070DC	C 7PF, D, 50V	C440	ECSF1EE225	T 2.2UF, 25V
C134	ECQB1H473JF	P 0.047UF, J, 50V	C441	ECSF1EE225	T 2.2UF, 25V
C136	ECCF1H180J	C 18PF, J, 50V	C442	ECEA1CGE471	E 470UF, 16V
C137	ECCF1H470JC	C 47PF, J, 50V	C452	ECEA1AGE330	E 33UF, 10V
C138	ECCF1H220J	C 22PF, J, 50V	C454	ECKD2H122KB2	C 1200PF, K, 500V
C139	ECKF1H103ZF	C 0.01UF, Z, 50V	C455	ECKF1H102KB	C 1000PF, K, 50V
C140	ECKF1H103ZF	C 0.01UF, Z, 50V	C456	ECQV1H224JZ	P 0.22UF, J, 50V
C141	ECQV1H104JZ	P 0.1UF, J, 50V	C457	ECQV1224JZ3	P 0.22UF, 100V MTV
C142	ECEA1CU470	E 47UF, 16V	C458	ECEA1VGE101	E 100UF, 35V
C143	ECKF1H103ZF	C 0.01UF, Z, 50V	C459	ECEA1VGE102	E 1000UF, 35V
C145	ECQB1H473JF	P 0.047UF, J, 50V	C460	ECQB1473KF3	P 0.047UF, K, 100V MTV
C147	ECKF1H121KB	C 120PF, K, 50V	C461	ECEA1VGE222	E 2200UF, 35V
C148	ECKF1H103ZF	C 0.01UF, Z, 50V	C462	ECEA1HGE3R3	E 3.3UF, 50V
C150	ECCF1H820J	C 82PF, J, 50V	C502	ECQB1H223JF	P 0.022UF, J, 50V
C151	ECEA0JU221	E 220UF, 6.3V	C503	ECCF1H221JU	C 220PF, J, 50V
C155	ECEA1HU330	E 33UF, 50V	C505	ECEA1HU010	E 1UF, 50V
C156	ECQV1H474JZ	P 0.47UF, J, 50V	C506	ECQB1H183KF	P 0.018UF, K, 50V
C157	ECQV1H334JZ	P 0.33UF, J, 50V	C507	ECEA1HGE010	E 1UF, 50V
C161	ECEA1CU100	E 10UF, 16V	C508	ECEA1AGE221	E 220UF, 10V
C162	ECKF1H103ZF	C 0.01UF, Z, 50V	C509	ECKD3D681JBN	C 680PF, J, 2KV
C166	ECKF1H103ZF	C 0.01UF, Z, 50V	C510	ECQB1H563JF	P 0.056UF, J, 50V
C167	ECEA0JU471	E 470UF, 6.3V	C511	ECWH12H682JY	P 680OPF, J, 1.2KV MTV
C168	ECQB1H102JF	P 1000PF, 50V	C512	ECKD3D182JBN	C 1800PF, J, 2KV
C169	ECEA1CN100S	E 10UF, 16V	C513	ECEA1VGE471	E 470UF, 35V

TX-21GF10M/Z

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
C514	ECKD2H471KB2	C 470PF, K, 500V	C643	ECKF1H103ZF	C 0.01UF, Z, 50V
C515	ECKD3D821JBN	C 820PF, J, 2KV	C644	ECKF1H103ZF	C 0.01UF, Z, 50V
C516	ECQB1H682KF	P 6800PF, K, 50V	C645	ECEA1HUR47	E 0.47UF, 50V
C517	ECKD3D331JBN	C 330PF, J, 2KV	C646	ECEA1CU101	E 100UF, 16V
C518	ECQM4103JZ	P 0.01UF, J, 400V MTV	C671	ECKF1H561KB	C 560PF, K, 50V
C519	ECEA2CNR47S	E 0.47UF, 160V	C690	ECEA1HN2R2S	E 2.2UF, 50V
C520	ECEA2EU100	E 10UF, 250V	C701	ECEA1HW4R7S	E 4.7UF, 50V
C521	ECKD2H821KB2	C 820PF, K, 500V	C801	ECKDNS471MBJ	C 470PF, M,
C522	ECWF2H334JNY	P 0.33UF, J, 200V	C802	ECQU2A473MN	P 0.047UF, M, 250V
C524	ECQM4103JZ	P 0.01UF, J, 400V MTV	C803	ECQU2A683MN	P 0.068UF, M, 250V
C525	ECKD2H821KB2	C 820PF, K, 500V	C805	ECKD2H472PU	C 4700PF, P, 500V
C526	ECEA1JGE100	E 10UF, 63V	C806	ECKD2H472PU	C 4700PF, P, 500V
C527	ECKD2H821KB2	C 820PF, K, 500V	C807	ECKD2H472PU	C 4700PF, P, 500V
C528	ECQB1H332KF	C 3300PF, 50V	C808	ECKD2H472PU	C 4700PF, P, 500V
C529	ECQB1H103JF	P 0.01UF, 50V	C809	ECOS2GP331DA	E 330UF, 400V MTV
C530	ECQE2474KS	P 0.47UF, K, 250V	C810	ECKD3D152JBN	C 1500PF, J, 2KV
C535	ECKD2H821KB2	C 820PF, K, 500V	C812	ECA1EFQ221	E 220UF, 25V
C538	ECQB1H333KF	P 0.033UF, K, 50V	C815	ECOS2DG221E	E 220UF, 200V
C539	ECKD3D182JBN	C 1800PF, J, 2KV	C816	ECEA1EGE102	E 1000UF, 25V
C550	ECEA1HU2R2	E 2.2UF, 50V	C817	ECOS2DG221E	E 220UF, 200V
C551	ECEA1HU100	E 10UF, 50V	C818	ECEA1EGE470	E 47UF, 25V
C581	ECKD2H331KB2	C 330PF, K, 500V	C819	ECEA1VU102	E 1000UF, 35V
C582	ECEA1VU101	E 100UF, 35V	C820	ECEA1VGE221	E 220UF, 35V MTV
C593	ECEA1HU220	E 22UF, 50V	C821	ECKD3A122KBN	C 1200PF, K, 1KV
C606	ECKF1H103ZF	C 0.01UF, Z, 50V	C822	ECKD2H391KB2	C 390PF, K, 500V
C607	ECKF1H103ZF	C 0.01UF, Z, 50V	C823	ECKD2H221KB2	C 220PF, K, 500V
C608	ECKF1H103ZF	C 0.01UF, Z, 50V	C824	ECKD2H221KB2	C 220PF, K, 500V
C609	ECKF1H103ZF	C 0.01UF, Z, 50V	C825	ECKCNS152MEJ	C 1500PF, M, MTV
C615	ECKF1H221KB	C 220PF, K, 50V	C826	ECEA0JU101	E 100UF, 6.3V
C616	ECKF1H221KB	C 220PF, K, 50V	C827	ECEA1EGE101	E 100UF, 25V
C619	ECCF1H100DC	C 10PF, D, 50V	C828	ECEA1CGE102	E 1000UF, 16V MTV
C620	ECQB1H563JF	P 0.056UF, J, 50V	C829	ECEA1CGE101	E 100UF, 16V
C621	ECCF1H150JC	C 15PF, J, 50V	C830	ECEA0JGE102	E 1000UF, 6.3V MTV
C622	ECEA1HU3R3	E 3.3UF, 50V	C831	ECKD2H152KB2	C 1500PF, K, 500V
C623	ECEA1HU2R2	E 2.2UF, 50V	C832	ECEA2AGE100	E 10UF, 100V
C624	ECEA1CU101	E 100UF, 16V	C835	ECEA2AGE100	E 10UF, 100V
C625	ECKF1H103ZF	C 0.01UF, Z, 50V	C836	ECEA1VU101	E 100UF, 35V
C636	ECKF1H472KB	C 4700PF, K, 50V	C837	ECKD2H102KB2	C 1000PF, K, 500V
C637	ECCF1H330J	C 33PF, J, 50V	C838	ECKD2H103PU	C 0.01UF, P, 500V
C638	ECCF1H330J	C 33PF, J, 50V	C839	ECKD3D391JBN	C 390PF, J, 2KV
C639	ECCF1H330J	C 33PF, J, 50V	C840	ECQV1H564JZ	P 0.56UF, J, 50V
C640	ECKF1H103ZF	C 0.01UF, Z, 50V	C841	ECQB1H473JF	P 0.047UF, J, 50V
C642	ECEA1CU101	E 100UF, 16V	C843	ECQV1H105JZ	P 1UF, J, 50V

TX-21GF10M/Z

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
C844	ECKD3A821KBN	C 820PF, K, 1KV	C2006	ECUX1H101JRX	C 100PF, J, 50V
C845	ECKDNS471MBJ	C 470PF, M,	C2007	ECUX1H330JRX	C 33PF, J, 50V
C1101	ECCF1H820J	C 82PF, J, 50V	C2008	ECUX1H330JRX	C 33PF, J, 50V
C1102	ECKF1H103ZF	C 0.01UF, Z, 50V	C2009	ECUX1H331JRX	C 330PF, J, 50V
C1103	ECKF1H103ZF	C 0.01UF, Z, 50V	C2010	ECUX1H682KBX	C 6800PF, K, 50V MTV
C1104	ECKF1H561KB	C 560PF, K, 50V	C2011	ECUX1H680JCX	C 68PF, J, 50V
C1105	ECCF1H330JP	C 33PF, J, 50V	C2012	ECUX1H151JRX	C 150PF, J, 50V
C1106	ECCF1H330JP	C 33PF, J, 50V	C2013	ECUX1H151JRX	C 150PF, J, 50V
C1107	ECEA0JU101	E 100UF, 6.3V	C2014	ECQV1H104JZ	P 0.1UF, J, 50V
C1108	ECKF1H101KB	C 100PF, K, 50V	C2015	ECQV1H224JZ	P 0.22UF, J, 50V
C1118	ECKF1H101KB	C 100PF, K, 50V	C2016	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV
C1119	ECEA0JU101	E 100UF, 6.3V	C2017	ECEA1CU470	E 47UF, 16V
C1121	ECEA1HU2R2	E 2.2UF, 50V	C2018	ECEA1CU470	E 47UF, 16V
C1124	ECKF1H101KB	C 100PF, K, 50V	C2019	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV
C1126	ECKF1H103ZF	C 0.01UF, Z, 50V	C2020	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV
C1127	ECEA1CU100	E 10UF, 16V	C2021	ECEA1CU470	E 47UF, 16V
C1128	ECKF1H101KB	C 100PF, K, 50V	C2022	ECEA1CU100	E 10UF, 16V
C1129	ECKF1H103ZF	C 0.01UF, Z, 50V	C2023	ECQV1H224JZ	P 0.22UF, J, 50V
C1130	ECEA0JU222	E 2200UF, 6.3V	C2024	ECUX1H331JRX	C 330PF, J, 50V
C1134	ECKF1H221KB	C 220PF, K, 50V	C2025	ECUX1H680JRX	C 68PF, J, 50V
C1135	ECEA0JU471	E 470UF, 6.3V	C2026	ECUX1H331JRX	C 330PF, J, 50V
C1136	ECCF1H101J	C 100PF, J, 50V	C2027	ECUX1H680JRX	C 68PF, J, 50V
C1137	ECQB1H223KF	P 0.022UF, K, 50V	C2028	ECQV1H224JZ	P 0.22UF, J, 50V
C1144	ECEA1CU220	E 22UF, 16V	C2029	ECEA1CU100	E 10UF, 16V
C1145	ECKF1H103ZF	C 0.01UF, Z, 50V	C2030	ECEA1CU470	E 47UF, 16V
C1163	ECKF1H103ZF	C 0.01UF, Z, 50V	C2031	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV
C1166	ECEA1CU100	E 10UF, 16V	C2032	ECEA1CU470	E 47UF, 16V
C1167	ECEA1EU4R7	E 4.7UF, 25V	C2033	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV
C1172	ECKF1H103ZF	C 0.01UF, Z, 50V	C2034	ECUX1H101JRX	C 100PF, J, 50V
C1176	ECKF1H101KB	C 100PF, K, 50V	C2035	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV
C1177	ECKF1H681KB	C 680PF, K, 50V	C2037	ECEA1AU101	E 100UF, 10V
C1178	ECCF1H101JC	C 100PF, J, 50V	C2039	ECUX1H102JCX	C 1000PF, J, 50V
C1179	ECCF1H101J	C 100PF, J, 50V	C2040	ECUX1H102JCX	C 1000PF, J, 50V
C1180	ECKF1H151KB	C 150PF, K, 50V	C2041	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV
C1201	ECEA0JKS470	E 47UF, 6.3V	C2042	ECQB1H223KF	P 0.022UF, K, 50V
C1202	ECEA1HKS010	E 1UF, 50V	C2043	ECQV1H334JZ	P 0.33UF, J, 50V
C1203	ECKF1H103ZF	C 0.01UF, Z, 50V	C2044	ECEA1CU220	E 22UF, 16V
C1204	ECCF1H561J	C 560PF, J, 50V	C2045	ECUX1H180JRX	C 18PF, J, 50V
C2001	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV	C2046	ECEA1CN100S	E 10UF, 16V
C2002	ECQB1H223KF	P 0.022UF, K, 50V	C2047	ECEA1CU470	E 47UF, 16V
C2003	ECQB1H223KF	P 0.022UF, K, 50V	C2048	ECUX1H180JRX	C 18PF, J, 50V
C2004	ECQV1H104JZ	P 0.1UF, J, 50V	C2049	ECEA1CN100S	E 10UF, 16V
C2005	ECUX1H101JRX	C 100PF, J, 50V	C2050	ECEA1CN470S	E 47UF, 16V

TX-21GF10M/Z

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
C2051	ECEA1CN470S	E 47UF, 16V	C2316	ECEA1HU100	E 10UF, 50V
C2056	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV	C2317	ECEA1EGE102	E 1000UF, 25V
C2060	ECQV1H104JZ	P 0.1UF, J, 50V	C2318	ECEA1CU470	E 47UF, 16V
C2061	ECUX1H101JRX	C 100PF, J, 50V	C2319	ECEA1CU100	E 10UF, 16V
C2062	ECUX1H101JRX	C 100PF, J, 50V	C2320	ECEA1HU101	E 100UF, 50V
C2066	ECKF1H102KB	C 1000PF, K, 50V	C2321	ECEA1HU101	E 100UF, 50V
C2067	ECKF1H102KB	C 1000PF, K, 50V	C2322	ECEA1HU101	E 100UF, 50V
C2068	ECKF1H272KB	C 2700PF, K, 50V	C2323	ECEA1EN470S	E 47UF, 25V
C2069	ECKF1H272KB	C 2700PF, K, 50V	C2324	ECKF1H103ZF	C 0.01UF, Z, 50V
C2070	ECKF1H151KB	C 150PF, K, 50V	C2325	ECQB1H473KF	P 0.047UF, K, 50V
C2071	ECCF1H151J	C 150PF, J, 50V	C2326	ECKF1H103ZF	C 0.01UF, Z, 50V
C2072	ECUX1H102KBN	C 1000PF, K, 50V	C2327	ECEA1CU100	E 10UF, 16V
C2073	ECUX1H102KBN	C 1000PF, K, 50V	C2328	ECQB1H473KF	P 0.047UF, K, 50V
C2203	ECQV1H224JZ	P 0.22UF, J, 50V	C2329	ECKF1H223ZF	C 0.022UF, Z, 50V
C2204	ECEA1EN4R7S	E 4.7UF, 25V	C2330	ECKF1H223ZF	C 0.022UF, Z, 50V
C2205	ECEA1EN4R7S	E 4.7UF, 25V	C2331	ECEA1HUR33	E 0.33UF, 50V
C2206	ECKF1H102KB	C 1000PF, K, 50V	C2332	ECEA1HUR33	E 0.33UF, 50V
C2207	ECCF1H470J	C 47PF, J, 50V	C2333	ECEA1HU010	E 1UF, 50V
C2208	ECCF1H120JC	C 12PF, J, 50V	C2334	ECEA1EN470S	E 47UF, 25V
C2209	ECEA1CU101	E 100UF, 16V	C2335	ECEA1HU010	E 1UF, 50V
C2210	ECQB1H223KF	P 0.022UF, K, 50V	C2336	ECEA1EGE102	E 1000UF, 25V
C2212	ECQV1H104JZ	P 0.1UF, J, 50V	C2338	ECEA1HU101	E 100UF, 50V
C2213	ECKF1H103ZF	C 0.01UF, Z, 50V	C2339	ECEA1HU010	E 1UF, 50V
C2214	ECEA1EN4R7S	E 4.7UF, 25V	C2340	ECEA1CU100	E 10UF, 16V
C2216	ECKF1H103ZF	C 0.01UF, Z, 50V	C2341	ECEA1CU100	E 10UF, 16V
C2217	ECEA1CU100	E 10UF, 16V	C2342	ECKF1H103ZF	C 0.01UF, Z, 50V
C2218	ECEA1CN470S	E 47UF, 16V	C2343	ECQB1H473KF	P 0.047UF, K, 50V
C2219	ECEA1CN470S	E 47UF, 16V	C2344	ECQB1H473KF	P 0.047UF, K, 50V
C2301	ECEA1HN2R2S	E 2.2UF, 50V	C2345	ECEA1HU100	E 10UF, 50V
C2302	ECEA1HN2R2S	E 2.2UF, 50V	C2346	ECEA1CU100	E 10UF, 16V
C2303	ECEA1CU470	E 47UF, 16V	C2347	ECEA1HN2R2S	E 2.2UF, 50V
C2304	ECEA1HU010	E 1UF, 50V	C2348	ECQB1H473KF	P 0.047UF, K, 50V
C2305	ECQB1H823KF	P 0.082UF, K, 50V	C2349	ECQB1H473KF	P 0.047UF, K, 50V
C2306	ECEA1CU100	E 10UF, 16V	C3001	ECKF1H103ZF	C 0.01UF, Z, 50V
C2307	ECQV1H104JZ	P 0.1UF, J, 50V	C3004	ECEA1HU010	E 1UF, 50V
C2308	ECQB1H222KF	P 2200PF, K, 50V	C3005	ECEA1HU010	E 1UF, 50V
C2309	ECQB1H223KF	P 0.022UF, K, 50V	C3006	ECEA1HN010S	E 1UF, 50V
C2310	ECQB1H223KF	P 0.022UF, K, 50V	C3007	ECEA1HU010	E 1UF, 50V
C2311	ECEA1HN2R2S	E 2.2UF, 50V	C3009	ECEA1HU010	E 1UF, 50V
C2312	ECEA1HN2R2S	E 2.2UF, 50V	C3011	ECEA1CU101	E 100UF, 16V
C2313	ECEA1EGE102	E 1000UF, 25V	C3012	ECEA1CN100S	E 10UF, 16V
C2314	ECEA1HN2R2S	E 2.2UF, 50V	C3013	ECEA1CU220	E 22UF, 16V
C2315	ECEA1CU100	E 10UF, 16V	C3015	ECEA1CU220	E 22UF, 16V

TX-21GF10M/Z

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
C3017	ECKF1H103ZF	C 0.01UF, Z, 50V	C3553	ECA1CM221	E 220UF, 16V
C3018	ECEA1HU010	E 1UF, 50V	C3554	ECUX1H100FCN	C 10PF, F, 50V MTV
C3020	ECEA1HU010	E 1UF, 50V	C3555	ECEA1CKN330	E 33UF, 16V
C3021	ECEA1CU101	E 1000UF, 16V	C3556	ECUX1H100FCN	C 10PF, F, 50V MTV
C3022	ECEA1AU471	E 470UF, 10V	C3557	ECUX1H330JX	C 33PF, J, 50V MTV
C3023	ECEA1HN010S	E 1UF, 50V	C3558	ECUX1H680JCX	C 68PF, J, 50V
C3024	ECKF1H103ZF	C 0.01UF, Z, 50V	C3559	ECUX1H470JRX	C 47PF, J, 50V MTV
C3037	ECEA1HU010	E 1UF, 50V	C3561	ECEA1HKA010	E 1UF, 50V
C3061	ECCF1H150JC	C 15PF, J, 50V	C3565	ECUX1H100FCN	C 10PF, F, 50V MTV
C3062	ECKF1H103ZF	C 0.01UF, Z, 50V	C3566	ECUX1H821KBX	C 820PF, K, 50V
C3069	ECKF1H471KB	C 470PF, K, 50V	C3567	ECUX1H821KBX	C 820PF, K, 50V
C3070	ECEA1CU100	E 10UF, 16V	C3568	ECUX1H821KBX	C 820PF, K, 50V
C3071	ECEA1CN470S	E 47UF, 16V	C3569	ECA1CM221	E 220UF, 16V
C3084	ECKF1H103ZF	C 0.01UF, Z, 50V	C3570	ECA0JM471	E 470UF, 6.3V
C3085	ECKF1H103ZF	C 0.01UF, Z, 50V	C3571	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV
C3086	ECKF1H101KB	C 100PF, K, 50V	C3572	ECUX1H121JX	C 120PF, J, 50V MTV
C3111	ECKF1H102KB	C 1000PF, K, 50V	C3573	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV
C3112	ECKF1H102KB	C 1000PF, K, 50V	C3575	ECA1CM101	E 100UF, 16V
C3113	ECKF1H102KB	C 1000PF, K, 50V	C3576	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV
C3114	ECKF1H102KB	C 1000PF, K, 50V	C3577	ECEA0JKA101	E 100UF, 6.3V
C3117	ECKF1H102KB	C 1000PF, K, 50V	C3578	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV
C3118	ECKF1H102KB	C 1000PF, K, 50V	C3580	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV
C3502	ECQV1H104JZ	P 0.1UF, J, 50V	C3581	ECEA0JKN220	E 22UF, 6.3V
C3503	ECQV1H104JZ	P 0.1UF, J, 50V	C3583	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV
C3505	ECUX1H104ZFW	C 0.1UF, Z, 50V	C3585	ECUX1H150JCX	C 15PF, J, 50V
C3518	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV	COILS		
C3522	ECUX1H102JCX	C 1000PF, J, 50V	L101	EIV7ES005B	TUNING COIL
C3524	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV	L103	TLTACC8R2K	PEAKING COIL 8.2U
C3525	ECEA1CKA470	E 47UF, 16V	L104	TLTACC8R2K	PEAKING COIL 8.2U
C3526	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV	L105	EIV7EN034B	COIL
C3532	ECQB1H223JF	P 0.022UF, J, 50V	L106	EIV7EN150B	COIL
C3533	ECQV1H104JZ	P 0.1UF, J, 50V	L107	TLTACC151K	PEAKING COIL
C3534	ECA0JM471	E 470UF, 6.3V	L109	EIV7EN175B	COIL
C3539	ECUX1H101JCX	C 100PF, J, 50V	L110	TLTACC121K	PEAKING COIL
C3540	ECUX1H101JCX	C 100PF, J, 50V	L112	TLTACC8R2K	PEAKING COIL 8.2U
C3541	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV	L123	TLTACC121K	PEAKING COIL
C3542	ECEA1CU100	E 10UF, 16V	L130	EIV7ES004B	IF TRANS
C3544	ECUX1H150JCX	C 15PF, J, 50V	L132	TLI157051	FILTER
C3545	ECUX1H270JCX	C 27PF, J, 50V	L133	TLTACCR56M	PEAKING COIL
C3546	ECUX1H103ZFX	C 0.01UF, Z, 50V MTV	L140	TLTACC180K	PEAKING COIL 18U
C3548	ECEA0JKA101	E 100UF, 6.3V	L141	TLTACC120K	PEAKING COIL 12U
C3550	ECEA1HKN010	E 1UF, 50V MTV	L142	TLTACC180K	PEAKING COIL 18U
C3552	ECUX1H103ZFX	C 0.01UF, Z, 50V	L143	TLTACC180K	PEAKING COIL 18U

TX-21GF10M/Z

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description	
L202	EIS7ES002B	COIL	L1110	TSK1002	COIL	
L203	TLTACC100K	PEAKING COIL 10U	L1111	TLTABT100K	PEAKING COIL 10U	
L303	ELB4L161B	COIL	L1112	TLTABT100K	CORE	
L436	TLTACC101K	PEAKING COIL 100U	L1113	EXCELDLR35C	PEAKING COIL 10U	
L501	EXCELSA35T	BEADS CORE MTV	L1114	TLTABT100K	PEAKING COIL 10U	
L502	ELH5L7004	COIL	L1115	TLTABT100K	PEAKING COIL 10U	
L504	ELC08D055	COIL	L1127	TLTACC101K	PEAKING COIL 100U	
L505	EXCELSA35T	BEADS CORE MTV	L1143	EXCELSA35T	BEADS CORE MTV	
L506	EXCELSA35T	BEADS CORE MTV	L1144	EXCELSA35T	BEADS CORE MTV	
L511	TSK1002	COIL	L2001	TLTACC102K	PEAKING COIL	
L512	TSK1002	COIL	L2002	TLTACC102K	PEAKING COIL	
L603	EIK7ES004B	COIL	L2003	EXCEMT103DTM	CAPACITOR ARRAY	
L617	TLTACC100K	PEAKING COIL 10U	L2004	EXCEMT103DTM	CAPACITOR ARRAY	
L641	TLTABT100K	PEAKING COIL 10U	L2006	TLTACC180K	PEAKING COIL 18U	
L642	TLTABT100K	PEAKING COIL 10U	L2008	TLTACC180K	PEAKING COIL 18U	
L643	TLTABT100K	PEAKING COIL 10U	L2016	TLTACC180K	PEAKING COIL 18U	
L655	EFDEN645A11G	DELAY LINE	L2017	TLTACC180K	PEAKING COIL 18U	
L701	TLH13711	CHOKE COIL	L2018	TLTACC180K	PEAKING COIL 18U	
L801	ELF18D860D	LINE FILTER	L2210	EIS7EN036B	COIL	
L802	ELF18D650W	LINE FILTER MTV	L3021	EXCELDLR25V	CORE	
L803	TSC930-4	CHOKE COIL	L3501	TLTACC4R7K	PEAKING COIL 4.7U	
L804	EXCELSA35T	BEADS CORE MTV	L3504	TLTACC100K	PEAKING COIL 10U	
L805	TSC930-4	CHOKE COIL	L3507	TLTACC100K	PEAKING COIL 10U	
L806	TSC930-4	CHOKE COIL	L3508	TLTACC3R3K	PEAKING COIL 3.3U	
L807	TSC930-4	CHOKE COIL	L3509	TLTACC3R3K	PEAKING COIL 3.3U	
L808	EXCELSA35T	BEADS CORE MTV	L3510	TLTACC100K	PEAKING COIL 10U	
L809	EXCELSA35T	BEADS CORE MTV	L3511	TLTACC3R3K	PEAKING COIL 3.3U	
L810	EXCELSA35T	BEADS CORE MTV	L3512	TLTACC3R3K	PEAKING COIL 3.3U	
L812	TSC930-4	CHOKE COIL	L3516	TLTACC4R7K	PEAKING COIL 4.7U	
L818	TLP15154Q	COIL MTV	L3518	EXCELDLR25V	CORE	
L819	EXCELSA35T	BEADS CORE MTV	L3541	TLTACC101K	PEAKING COIL 100U	
L820	EXCELSA35T	BEADS CORE MTV	LC101	ELB5A024	COIL	
L821	EXCELSA35T	BEADS CORE MTV	LC602	TAXSAB4250	FILTER MTV	
L823	TSC930-4	CHOKE COIL	LC670	ELB4K133B	COIL MTV	
L1101	TLTABT100K	PEAKING COIL 10U	LC3072	ELB4L124B	COIL	
L1102	TLTABT100K	PEAKING COIL 10U	TRANSFORMERS			
L1103	TLTABT100K	PEAKING COIL 10U	T501	TLF15562F	FLYBACK TRANS. MTV	
L1104	TLTABT100K	PEAKING COIL 10U	T502	ETH19Y70AY	H DRIVE TRANS	
L1105	TLTABT100K	PEAKING COIL 10U	T801	ETS39AF1D6NC	SWITCHING TRANS. MTV	
L1106	EXCELSA35T	BEADS CORE MTV	T2001	TLS158X53Q1	COIL MTV	
L1107	EXCELSA35T	BEADS CORE MTV	DIODES			
L1108	TSC930-4	CHOKE COIL	D141	MA162	DIODE	
L1109	EXCELSA35T	BEADS CORE MTV	D152	MA4051M	DIODE	

TX-21GF10M/Z

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
D202	MA165	DIODE	D827	TVSEU2	DIODE
D203	MA165	DIODE	D829	MA182	DIODE
D412	MA165	DIODE	D830	MA4020	DIODE
D432	MA29WA	DIODE	D831	EG01	DIODE
D433	MA29WA	DIODE	D833	TVSEU1Z	DIODE
D434	MA4051M	DIODE	D834	TVSEU1Z	DIODE
D461	ERA15-01	DIODE	D1111	LN21RPHCF2	LED MTV
D462	MA4360M	DIODE	D1112	MA165	DIODE
D502	MA4360L	DIODE	D1117	MA4036H	DIODE
D503	MA167	DIODE	D1120	MA4068M	DIODE
D504	TVSEU2	DIODE	D1121	MA4068M	DIODE
D506	TVSRU2AM	DIODE	D1132	MA4082H	DIODE
D507	ERB06-15	DIODE	D1176	MA165	DIODE
D508	TVSEU2	DIODE	D1201	PH310	DIODE MTV
D509	TVSEU2	DIODE	D2001	BB405B	DIODE
D522	MA4108J	DIODE	D2003	MA165	DIODE
D523	MA171	DIODE	D2004	BB809	DIODE
D531	TVSEU2	DIODE	D2303	MA165	DIODE
D613	MA165	DIODE	D3037	MA4180M	DIODE
D614	MA165	DIODE	D3038	MA4180M	DIODE
D615	MA165	DIODE	D3509	MA3082M	DIODE
D616	MA165	DIODE	D3526	MA151K	DIODE
D634	MA165	DIODE	D3527	MA3082M	DIODE
D635	MA1062M	DIODE	D3528	MA151K	DIODE
D701	MA165	DIODE	D3529	MA151K	DIODE
D702	MA165	DIODE	D3530	MA151K	DIODE
D801	TRPW5B0N120D	POSISTOR MTV	D3541	MA151K	DIODE
D803	TLP621GR-LF2	PHOTO COUPLER	D3542	MA151K	DIODE
D804	MA4160M	DIODE	D3566	MA151WA	DIODE
D806	ENC621D-10A	RESISTOR MODULAT. MTV	D3567	MA151WA	DIODE
D807	TVSRU2AM	DIODE	D3568	MA151WA	DIODE
D808	TVSRU1	DIODE	D3569	MA151K	DIODE
D809	RU3YX-M	DIODE	INTEGRATED CIRCUITS		
D810	MA171	DIODE	IC101	AN5179K	LINEAR IC
D811	RU3YX-M	DIODE	IC102	TVSUPD4066BC	C-MOS LOGIC IC
D812	MA182	DIODE	IC104	AN5071	LINEAR IC
D817	D4SB80Z	DIODE	IC105	TVSUPD4066BC	C-MOS LOGIC IC
D818	MA162	DIODE	IC201	M52317SP	LINEAR IC MTV
D819	MA4091H	DIODE MTV	IC402	TA8859P	IC
D820	MA4360L	DIODE	IC451	TA8403K	IC MTV
D822	MA182	DIODE	IC601	AN5607K	LINEAR IC
D824	MA4062H	ZENER DIODE	IC802	STR-S6707	IC MTV
D825	TVSEU1	DIODE	IC803	SE140N	IC

TX-21GF10M/Z

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
IC804	AN78M05LB	LINEAR IC	Q655	2SC1685-R	TRANSISTOR
IC805	UPC2412HF	IC MTV	Q670	2SA564AR	TRANSISTOR
IC806	AN7809	LINEAR IC	Q705	2SA564AR	TRANSISTOR
IC807	AN7805	LINEAR IC	Q706	2SD1266A	TRANSISTOR
IC1102	MN152810TTD	MOS IC	Q707	2SA1309A	TRANSISTOR
IC1104	24C01AIPB21	IC MTV	Q802	2SB1438	TRANSISTOR MTV
IC1106	MN1280R	IC (MOS IC)	Q803	2SC1473	TRANSISTOR
IC1201	UPC2801AHA	IC MTV	Q804	2SC1984LF-4	TRANSISTOR MTV
IC2001	TDA8732/C1	IC	Q806	2SA564AR	TRANSISTOR
IC2002	SAA7282ZP/M3	LINEAR IC	Q807	TF361MA	SAW FILTER MTV
IC2003	AN6558	LINEAR IC	Q1101	2SC1685-R	TRANSISTOR
IC2201	TDA8417/V3	LINEAR IC MTV	Q1111	2SC1685-R	TRANSISTOR
IC2206	AN5215	LINEAR IC	Q1112	UN4212	TRANSISTOR
IC2301	UPC1891ACY	IC	Q1113	UN4212	TRANSISTOR
IC2302	CXA1279AS	IC	Q1136	2SC1685-R	TRANSISTOR
IC2303	AN7169	LINEAR IC	Q1160	2SC1685-R	TRANSISTOR
IC2306	TVSM5218L	LINEAR IC	Q2002	2SC2480TTX	TRANSISTOR MTV
IC3001	AN5858K	LINEAR IC	Q2003	2SC2480TTX	TRANSISTOR MTV
IC3501	SAA5246AP/E	IC MTV	Q2004	2SD601ATX	TRANSISTOR MTV
IC3503	24C01AIPB21	IC MTV	Q2005	2SD601ATX	TRANSISTOR MTV
IC3506	LC3564QM-10	LINEAR IC MTV	Q2006	2SD601ATX	TRANSISTOR MTV
IC3507	MAB8461P/223	IC MTV	Q2301	2SC1685-R	TRANSISTOR
TRANSISTORS			Q2302	2SC1685-R	TRANSISTOR
Q101	2SC2188	TRANSISTOR	Q2303	2SA564AR	TRANSISTOR
Q102	2SC1685-R	TRANSISTOR	Q3001	2SC1685-R	TRANSISTOR
Q103	2SC1685-R	TRANSISTOR	Q3006	2SC1685-R	TRANSISTOR
Q105	2SC2058S	TRANSISTOR	Q3015	2SC1685-R	TRANSISTOR
Q108	UN4212	TRANSISTOR	Q3016	2SC1685-R	TRANSISTOR
Q110	2SC2058S	TRANSISTOR	Q3024	2SC1685-R	TRANSISTOR
Q115	2SA564AR	TRANSISTOR	Q3061	2SC1685-R	TRANSISTOR
Q116	UN4214	TRANSISTOR	Q3062	2SC1685-R	TRANSISTOR
Q117	2SC1685-R	TRANSISTOR	Q3071	2SC1685-R	TRANSISTOR
Q168	2SC1685-R	TRANSISTOR	Q3072	2SC1685-R	TRANSISTOR
Q301	2SC1685-R	TRANSISTOR	Q3084	2SC1685-R	TRANSISTOR
Q302	2SC1685-R	TRANSISTOR	Q3501	2SD601ATX	TRANSISTOR MTV
Q351	2SC2923	TRANSISTOR	Q3502	2SD601ATX	TRANSISTOR MTV
Q352	2SC2923	TRANSISTOR	Q3503	2SD601ATX	TRANSISTOR MTV
Q353	2SC2923	TRANSISTOR	Q3504	2SD601ATX	TRANSISTOR MTV
Q451	2SA564AR	TRANSISTOR	Q3505	2SD601ATX	TRANSISTOR MTV
Q501	2SD1555	TRANSISTOR MTV	Q3506	2SD601ATX	TRANSISTOR MTV
Q502	2SC3941H	TRANSISTOR MTV	Q3508	2SD601ATX	TRANSISTOR MTV
Q503	2SA564AR	TRANSISTOR	Q3513	2SD601ATX	TRANSISTOR MTV
Q511	2SC1685-R	TRANSISTOR	Q3514	2SB709ATX	TRANSISTOR MTV

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
Q3515	2SD601ATX	TRANSISTOR MTV	S1101	EVQ-PBD05	SWITCH MTV
Q3522	2SB709ATX	TRANSISTOR MTV	S1102	EVQQKH06K	SWITCH
Q3525	2SB709ATX	TRANSISTOR MTV	S1103	EVQQKH06K	SWITCH
Q3526	2SD601ATX	TRANSISTOR MTV	S1104	EVQQKH06K	SWITCH
Q3527	2SD601ATX	TRANSISTOR MTV	S1108	EVQQKH06K	SWITCH
Q3566	2SD601ATX	TRANSISTOR MTV	S1109	EVQQKH06K	SWITCH
OTHERS			S1110	EVQQKH06K	SWITCH
E.20	TJS5A9420	8P CONNECTOR	S1111	EVQQKH06K	SWITCH
E.21	TJS5A9420	8P CONNECTOR	S1112	EVQQKH06K	SWITCH
E.22	TJS118610	4P CONNECTOR	S1113	EVQQKH06K	SWITCH
E.32	TJS118620	5P CONNECTOR	T.1	TJS5A8170	CONNECTOR
E.33	TJS118610	4P CONNECTOR	T.1	TJS6A8560	4P CONNECTOR
E.82	TJS5A9830	8P CONNECTOR	T.2	TJS5A9490	8P CONNECTOR MTV
E.83	TJS5A9830	8P CONNECTOR	T.2	TJS5A9500	6P CONNECTOR
F801	XBA2C31TR0	FUSE 250V 3.15A △	T.3	TJS5A8160	8P CONNECTOR
F-801	TJC6320	FUSE HOLDER, SMALL △	T.3	TJS5A9420	8P CONNECTOR
JA.1	ERJ6GEY0R00	M 00HM, J, 1/10W	X101	TFCH38MVK03	SAW FILTER
JA.2	ERJ6GEY0R00	M 00HM, J, 1/10W	X102	EFCS6R5MW5	CERAMIC FILTER
JA.4	ERJ6GEY0R00	M 00HM, J, 1/10W	X103	EFCS6R0MW5	CERAMIC FILTER
JA.5	ERJ6GEY0R00	M 00HM, J, 1/10W	X104	EFCS5M7MW3	CERAMIC FILTER
JA.6	ERJ6GEY0R00	M 00HM, J, 1/10W	X105	EFCS4R5MW3BA	CERAMIC TRAP
JA.7	ERJ6GEY0R00	M 00HM, J, 1/10W	X106	EFCH32MVK2N	SAW FILTER △
JA.8	ERJ6GEY0R00	M 00HM, J, 1/10W	X201	EFCS5R5MS5	CERAMIC FILTER
JBA.	ERJ6GEY0R00	M 00HM, J, 1/10W	X202	EFCS4R5MS5	FILTER
JBB.	ERJ6GEY0R00	M 00HM, J, 1/10W	X203	EFCS6R5MS5	CERAMIC FILTER
JBC.	ERJ6GEY0R00	M 00HM, J, 1/10W	X205	EFCS5R5MS5	CERAMIC FILTER
JBY.	ERJ6GEY0R00	M 00HM, J, 1/10W	X206	SFSH6R0MDB	CERAMIC FILTER MTV
JS.1	ERJ6GEY0R00	M 00HM, J, 1/10W	X212	CSB1000J527	CRYSTAL OSC MTV
JS.3	ERJ6GEY0R00	M 00HM, J, 1/10W	X506	CSB500F48	CRYSTAL OSC MTV
JS.6	ERJ6GEY0R00	M 00HM, J, 1/10W	X632	TS116M20	CRYSTAL OSC MTV
JS.11	ERJ6GEY0R00	M 00HM, J, 1/10W	X634	TS816M32	CRYSTAL OSC MTV
JS.12	ERJ6GEY0R00	M 00HM, J, 1/10W	X1102	TAF10020	CERAMIC FILTER MTV
JS.14	ERJ6GEY0R00	M 00HM, J, 1/10W	X2001	TSS2139M	CRYSTAL MTV
JS.15	ERJ6GEY0R00	M 00HM, J, 1/10W	X2002	TSS2061-M	CRYSTAL
JS.16	ERJ6GEY0R00	M 00HM, J, 1/10W	X2003	EFCA5R5MB3	CERAMIC TRAP
JS.20	ERJ6GEY0R00	M 00HM, J, 1/10W	X2201	TSS2076-M	CRYSTAL
NC.1	TJS5A9450	8P CONNECTOR	X2202	EFCS5R74MS5A	CERAMIC FILTER
NC.2	TJS5A8160	8P CONNECTOR	X2203	EFCS5R74MS5A	CERAMIC FILTER
P.82	TJS5A9840	8P CONNECTOR	X3503	TSS2077-M	CRYSTAL
P.83	TJS5A9840	8P CONNECTOR	X3506	TSS2121-M	CRYSTAL
R.1	TJS5A9900	6P CONNECTOR			
S451	EVQRAAL10	SWITCH			
S801	ESB99902S	SWITCH			